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THE COMMONWEALTH OF THE UNIVERSITY: AN ESSAY ON DUTIES

John F. A. Taylor

I

I HAVE CHOSEN to speak about the idea of a university and the bond of allegiance which unites its members. The members of the university community acknowledge many ties besides the tie of the academy—the bond of family, the bond of citizen, the bond of party, of sect, of class, even (some of them) the bond of humanity. In each of these groups, a man's obligations are real only in the measure that his allegiance is real. In a voluntary association such as the university there are conditions under which alone allegiance will be granted, and it is these conditions of allegiance which have therefore now and again to be examined.

In defining the idea of a university, I do not intend to state an ideal. I profess only to describe what is implicit in the simplest act of the academic community. For it is surely a real and very serious question to reflect what is indispensably required in order that a community should enact the role of an academic community, and that is the question posed when one sets out to define the idea of a university. The ideal, says Goethe, is the spirit of the actual. That is why men, who pass their lives in the crush of actualities, have sometimes to reflect, lest, being crushed, they lose sight of the spirit of their simplest acts. There is a bond implicit in the touch of a child's hand, and as anyone who has loved a child knows, the strength of the bond is not measured by the

strength of ligatures and digits. So, there is a bond implicit in the community of the university, and if it is not customary to reflect upon it, or to honor it by protestation, that is not because it is not real or worthy, but because we honor it, as we honor all things best, in the quietness of our acts of every day.

I am aware that I shall be thought, for what I have just described as actuality, irreparably soft-headed. I speak of circuses when I should speak of bread. Let it be confessed that I earn my living in the academic community, that I eat out of it, even that I should be destitute without it. That is one of the reasons why, to me, philosophy is a consolation. It is nevertheless true that, consoled or unconsoled, I eat out of our community's pocket. Nor should the brute actuality of the case be less than fully stated. If my residence in the academic community had no motive except the earning of a living, no other incitement except to labor and be paid, no one should ever be the wiser, and I might live out my life with my belly full. No student should go untaught, no administrator unsatisfied, no publisher unglutted. But I should have committed nevertheless a fraud. What is worse, the fraud would run not only against the community whose function I had betrayed, but against myself, the member of the community, whose part I had deserted. For the community of the university is not a community of bellies, although I am persuaded, and the university should never forget, that each member of the community has one. That motive which belongs to every vocation is the distinctive motive of none, and if you make the idea of a university to consist in money-getting, you forbid yourself your problem, which is to distinguish between one form of money-getting and another. That is the Marxist deception wherever it occurs, that it professes to analyze what it leaves untouched: there remains still the difference between physicians and fools, though physicians sweat to eat as well as fools.

The economic livelihood which each gets from his labors is no doubt one of the motives for the performance of his labors, and to suspend that motive, to treat it as unreal or capricious or ignoble, is to imperil the academic community and to divorce it from its proper act. That act can be performed only when the material conditions of its performance have been supplied. Cancel those conditions, you cancel the act by forbidding it. Supply those conditions, you render the act possible by permitting it. But in no case is the act ensured by these conditions alone. Fishers of men, you shall not have your object by purchase. You are still left with the problem of the idea of a university, of the obligations of the academic community, even when the conditions of its existence have been supplied. That is why presidents and deans are, in the end, so vanquishable a lot. They are like women. They supply the conditions of generation, but can't do it alone.

So I am compelled again, even at peril of being thought soft-headed, to address you to the idea of a university and to the bond of allegiance which unites men—men and presidents, and even deans—within it.

II

The organized societies into which human beings are born have a manner of existence which is not granted to human beings themselves. Within their structures men live and die; the societies endure. The enduring thing, which is the society, is nothing apart from the individuals out of whose dust its life is formed. It nevertheless retains its identity as the same society though all the individuals who compose it have changed. Its identity is in the structure which they animate, and such identity as they have, in their coming and going, they acquire by animating it, taking their character from the relations which it supplies.

The university is such a structure, the sieve of generations

through which we, proud dust, are strained. The society of scholars isolates itself, in the broad world, as a special group. Its bond of community is so peculiar that men are not accustomed to reflecting on it. It is a voluntary association. No one has inherited his status in it, as men inherit passively, by the simple adventure of being born, their status in a species, in a race, or in a nation. Its membership is distributed not according to what men suffer, but according to what men do. Each belongs to it only by what he freely affirms, and there is no belonging to it except by affirmation.

What is this bond which unites man to man and overleaps the boundaries that divide generations and nations? Among scientists it is a rule of method, the common rule of evidence which presides over the conduct of their inquiries. The society of scientists is bound together by common commitment to a rule of evidence in precisely the same way that the citizens of a political community are bound together by common commitment to the principle of a legal order. The peculiarity of the society of scientists is that, unlike the nation-state, its members have no single geographic locus. It is an international community whose members never congregate—surely the most tightly-knit, as it is the least centralized, community on earth. Its executive and judicial functions are distributed universally among its members. The community is where they are, and they are dispersed wherever their rule is respected, without regard for the boundaries and moral separations which in other ways, for other purposes, divide men and communities from one another. Its members are scattered athwart time and the world. Men who have never seen each other's faces nevertheless participate in a common task and common dedication. The universal priesthood of believers finds nowhere else its so perfect realization, not in sect of Protestant, neither at Walden Pond. Protestantism is soliloquy, Walden is egotism: science is neither. Only its practitioners are isolated; the

practice is unitary, and they are united in it. Of the tolling of a bell when one of his parishioners died, John Donne wrote: "No man is an Iland, intire of itself; every man is a peece of the Continent, a part of the maine; if a Clod be washed away by the Sea, Europe is the lesse, as well as if a Promontorie were, as well as if a Mannor of thy friends or of thine owne were; any mans death diminishes me, because I am involved in Mankinde." So all universities are bound together. A university is, in a free society, the least isolated of all civilized communities. Nations may consider themselves apart; universities never can. He who regards the university as an island, he who lets it become one, is treasonable to it. He provincializes its community, diminishes it, and diminishes himself within it.

Therefore, proud dust, if you would make a university, conceive it to be no less than it is, for it is inevitably more than you are, singly or in aggregate. Let no administrator presume himself to direct a world, who directs only a colony; let no scholar profess to have the truth, who has only his limited vision of it; let no teacher claim to form a man, who is capable only of forming a temperament. Academics are of all breeds of men, I suspect, the worst sentimentalists, and sentimentality is—in framing the idea of a university, as in all things that matter greatly—the cardinal sin of all, cardinal because it leaves the object of sentiment everywhere exposed. In this the professors of the sciences are, according to my observation, the worst offenders. For they describe science as if it were their precinct, the scientific method as if it were exhausted in themselves. On the contrary, science does not belong to them; they belong to it. Therefore I do not fail to applaud them. But what I honor by applause is the role which they enact, and themselves only so far as they enact it. I revere the obligation which they observe and the demands of the community which they nurture. In the performance of so austere a role the egotist has no place. He

wears priest's robes, but has not the humility of priests, who regard the robe only as the token of the office, and the office as a set of claims upon them, which every man should aspire to honor, but to which no man can without arrogance claim to be equal.

III

Out of his tragic sensitivity Pascal used to meditate the spectacle of the man who hunts the hare. Why does the hunter search out the hare and pursue it, heedless of the absurd disproportion between his effort and his prize? Does he so value the hare? Not at all. If you offer him the hare ready-caught, he will regard it with proper contempt. The virtue of the hare is not in the having of it, but in the pursuit of it. For, so long as the hunter looks abroad for the hare, he is absolved of the really insupportable task of looking inward upon himself. That is his special peril as a man, which the pursuit of the hare enables him to escape, or at least for a season to postpone, the peril of reflecting that, except by what he affirms, except by the obligations he imposes on himself, he the pursuer is, like the hare pursued, a poor nothing, the proper object of contempt.

So, in the university, the university acquires its character from its affirmations. In part its ends are given to it, given to it by the society which is beyond the university. It is but society's instrument and tool for the pursuit of ends which not it, but society, has chosen. Yet the society which creates the university in its midst, and sustains the university by its support, is not competent, except in the broadest terms, to define its program. It may, since the university is its creature, place a veto on any of its acts, or suspend its acts entirely. But in this it is prepared to govern the university only negatively. What positively the university shall do, what its positive acts shall be, society leaves undefined, leaves undefined because it is not itself competent to define those acts and

has created the university to act for it to that purpose. That is why the simple existence of a university is socially so extraordinary a phenomenon. The society which creates a university creates its own critic. The Lord God who made Adam out of the dust of the ground may be presumed in foreknowledge absolute to have known that in the will of this creature which had the capacity for obedience there was implanted also the capacity for disobedience as well. The society which has dared to create the university has not the assurance which foreknowledge can give. It has no assurance that it will not be disobeyed, and except through us no way of discovering the disobedience when it occurs. That is its civilized and civilizing risk. But it is also the reason for regarding the work of the university as a civilized and civilizing trust. The university community is under no effective law except as it gives laws to itself. Its freedom is its responsibility. It is the single instrumentality of society for which society has devised, and can devise, no effective control. It has only the knowledge that as it builds society, it builds itself, that as it tears society's vitals, it tears its own. Nevertheless, the university's service to society varies, and will always vary, as it interprets its responsibility to society. Make no mistake. The treason of the universities which Hitler captured was not Hitler's treason; it was the treason of the academic community. Hitler succeeded; it was they—men like you and me—who failed, who failed because they deserted the role which society in its dumb trust, with the innocence of a child, had consigned to their care. I am by no means sure that we should have acted our part better. But that is not the point. There is always a Hitler. Society is always, with respect to some matters, a little child. There is therefore always, so long as there is a university, the part to be acted. Of that part Hitler knows nothing, and society knows little. The part can be played only by those who know what are the demands of the part and what is at stake in the acting of it.

Unless the academic community acts it, the part shall go unacted, and the idea of a university shall become, like Othello's occupation, a thing gone, heroism without hero.

In its relation to society the university's function is, in the first instance, to provide the means to ends which society has chosen for itself. But it is a lame architect who houses an activity without civilizing it. You do not sensitively house the life of a man by providing only for the movement of his bowels, and if in seeking to serve his needs you search out only the known needs which he declares and will think to define, you will serve him very ill indeed. He buys the services of an architect; you give him the services of a privy-carpenter. You leave him where he was, still vexed by desolations which he feels but cannot state. "The foxes have holes, and the birds of the air have nests; but the Son of man doth not know where to lay his head." What really he wants is not a space in which he can be sheltered, but one in which, in addition to being sheltered, he can be made perfect, in which he can realize such goodness as he finds real but undeveloped within him. Just so, then, as obedient critic, the university has a function beyond the satisfaction of any needs which society now knows. In the ripeness of its performance it has the function of illuminating ends which society is not now equipped even to discern. No man, least of all the university, has the right of prescribing ends to mankind. But there is a duty which falls, if not only to the university, yet still to it no less than to other communities of men, and certainly to it more than to some, the duty of discovering the ends implicit in mankind's perfect and unhindered development, ends not now chosen because they remain in society and in us unimagined or incompletely affirmed, ends nevertheless real because, given the alternatives of free choice, mankind would embrace them as its own.

I despair of making mathematics moral. Even if I should succeed, there would still be the mathematicians, and with

respect to them everybody is agreed that such an aspiration were madness. But that is not what is required. I have not set out to define the idea of a mathematician, or the idea of mathematics, but the idea of a university, and though it is true that mathematics is amoral, and mathematicians make universally the mistake of supposing themselves so too, it is impossible so to regard the university. It is the saint, not the saint's leg-bone, that is holy. It is the university, not the university's mathematics-bone, that is moral. The mathematician, considered with respect to the community of mathematicians, may be morally neutral. His partisanship counts for nothing: it matters not at all that it is he, and not another, who takes the sum of 2 and 2, so long as each taker observes a common rule in taking it. Considered with respect to the university community, the mathematician is permitted no such license of anonymity; his partisanship as mathematician is all that counts. It matters everything that it is a mathematician who speaks, for there is no other who can speak competently in his place. This reflection will not, I devoutly hope, alter his mathematics. But it makes every difference to his conception of his role as member in the moral commonwealth of the university. The university could be absolved of its moral role, and he of his part in it, only if it had no relation to society beyond it. Of that external relation it is never, and can never in obedience seek to be, absolved, and so long as it sustains that relationship, its role is, for better or worse, a moral one.

It may therefore be well to consider the idea of a university in its internal relations, to consider, that is, the sense in which, for the sake of performing its function in society, it must conceive itself an intellectual commonwealth.

IV

For if, as obedient critic, in its relation to the society it serves, the university is a moral commonwealth, it is also, in

the relation of its parts to each other, an intellectual commonwealth as well. Ideas are its commodity, and there is no commodity so subject to fraudulence, so liable to misuse, so readily debased. That is why there can never be any question whether the *Communist Manifesto* should be taught in the university. It must be taught. Only it is necessary that, in the university which teaches it, there be taught beside it Aristotle's *Politics,* St. Augustine's *City of God,* and Locke's *Essay Concerning Civil Government.* You do not treat a cancer by concealing it: you cut it out. But ideas are your true atom, subject to no fission: they cannot be cut, they can only be analyzed. An idea is not killed by being insulated. The only way to kill an idea is to expose it, the only way to preserve an idea is to expose it. Good or bad, exposed it must be, at all events and at any peril. Against an idea which is insulated from open discussion society is left permanently undefended. It is capable of defending itself only against ideas which it understands, and is helpless to defend itself against ideas which it only fears. For the fateful fact is, that men do not act according to the truth, but according to what they believe to be true. Control therefore their beliefs, and you control their actions. They will die for a falsehood in which they believe more willingly than live for a truth which they repudiate, and if for a belief which they hold true they be denied that vision of alternatives which would enable them to discover it false, they will endure in dumb innocence what would revolt them in clear knowledge. A free society's motive for erecting the institution of the university within it is nothing less than this vision of evil. Society will veto any idea which it does not understand, and its veto, uninformed, is indiscriminate. It will suppress truth no less than falsehood, sanctity no less than vileness, the idea which will emancipate it no less than the idea by which it will be enslaved. A free society therefore creates the university as its critic, in order that its ideas shall not be limited

fortuitously by its understanding. That *it* dares to do. The university which dares not to discuss the ideas society fears, which so circumscribes its intellectual role as to conform only to the understanding which society is prepared at any time to give, is therefore in treasonable default against society. It has deserted its proper competency and vocation, forgotten a higher loyalty in the pusillanimous pursuit of a lower one, which, when it cancels the higher, is no loyalty at all.

The university can be a moral commonwealth only on condition that it is first an intellectual one. Its moral role has an intellectual justification, or has no justification whatever. Therefore its members, who are the agents of a moral commonwealth, must be such as they are, men who, in Max Weber's definition of an intellectual, live not by ideas but for their sake.

I should announce myself in this matter as no neutral. I profess to speak only for myself. But I suggest that, whoever speaks, the conception of a university must represent a philosophical act. There is no such thing as a university of botany, or of medicine, or of public service, or of business, or of fine arts, or of law. There are only departments of botany, and divisions of fine arts, and colleges of medicine. The idea of a university includes these, but is more than any one of them. It is more than any group of them. It is more than the aggregate of all of them together.

V

The concept of a university represents an affirmation. It affirms that the several disciplines which fall within its precinct are not merely juxtaposed avenues of pursuit, but constitute a real totality, a universe of inquiry, in which each separate study forms a part of a single grand enterprise.

The term "university" may have other meanings than this. It may mean, for example, the legal entity, the guild or cor-

poration (*universitas*), which is a composition of members—of faculty, of students, of administrative officers. Legally, it is an artificial person; it can sue and be sued; it has rights enforceable at law; it has incumbent duties which can be legally exacted from it. But that is as others see it who are abroad from it. If you would know what a family is, you do not consult a bachelor. The counsel you want is the counsel not of a spectator, but of a participant. The bachelor can tell you only what you are equally free to observe; the participant can tell you what is not available for your observation, since the bond of obligation which unites a family is not observable by anyone who has not himself experienced it. The sociologists, who are bachelors by profession, virgins with empty lamps, will not like this, but I cannot help it. The matter which concerns me in forming the idea of a university is not how others see it, but how it sees itself. The university, as it sees itself, affirms the integrity of the intellectual domain.

The interrelatedness of scholarly disciplines is nothing invented. It exists, and has always existed, in institutions of higher learning wherever the sciences and humanities are taught. In the natural sciences this interrelatedness of disciplines is postulated as a basic assumption: to every physiological phenomenon there exists a biological condition; to every biological phenomenon there exists a chemical, and hence also a physical, basis.

Among the humanities or liberal arts affinities of this kind are less rigorously formulated but are, in fact, everywhere assumed. A historian undertakes his study of societies and civilizations upon the assumption that art, literature, and philosophy are related to politics and war, politics to social conditions, social conditions to economics, and so on.

The interrelatedness of humane and scientific studies lies at the basis of the concept of a university. These studies are practiced together because they belong together and are

impoverished when they are held apart. Everywhere it has been assumed that this actual interrelatedness, because it exists, is therefore necessarily apparent. It is not. On the contrary, it requires to be discerned and by design to be made visible. To discern it and to make it visible is the burden of the agonized solitude of every scholar, out of his mute sense of the relatedness of things to pluck, as Hotspur plucked bright honor, understanding. To discern it and make it visible is one part of the work of education. Philosophically, this part of the work of education is the part which, in a strict formulation, is called "general."

Between education and general education there is not a difference of kind. In the system of a university each is the indivorcible complement of the other. Each completes what the other sets out to do, and both are in default by isolation.

Since about this matter so much confusion has been spoken, spoken both by Specialists and by Generalists, spoken invariably by Manichaeans, who neither say what they mean nor mean what they say, spoken sometimes by persons who have not taken care to have a meaning, it will be well to deal seriously with it. I shall say what I mean. You are free to reject that meaning. But if you reject it, I submit that you have rejected the idea of a university.

Ideally, a program of general studies is an attempt to restore the integrity of a university in an order of society in which universities had ceased either to enact or to communicate their philosophic function. It reappropriates the function of a university as an educational institution. That a university enacts other functions besides the function of education is not in question; that an educational function is in part performed by special studies is not in question. The sole matter requiring assent is simply this, that the relations among the sciences and arts do constitute a subject-matter as positively defined as the content of any special discipline —mathematics, physics, French literature, or the history of

the Tudors. The study of the interrelationships of the sciences and arts is an indispensable correlate of these special studies, nor can it be suspended without suspending their veritable consequence for society and man and their actual significance for each other.

General education, in the sense which I have defined, does not mean an education for the many; neither does it mean an education for the few. On the contrary, it stipulates the fundamental condition of any education whatever, that it shall be in its issue philosophic, that it shall represent such wisdom as in the concert of our little knowledge we are capable of. The ignorance which Socrates professed is the only true wisdom, the wisdom which knows its own limits. The wisdom which the Sophists professed is ignorance unassuaged, ignorance which acknowledges no limits except limits not its own. Ignorance may cancel learning, but there is no ignorance so contemptible as learned ignorance, as the ignorance of the learned, who would, in a sloth of intellect, leave the tasks of philosophy to infants still suckling. Out of the darkness that covers it and us, a suckling infant must at last decide its own destiny. You do not, therefore, to preserve its freedom, lock it in a closet. Nor do you permit it to lock itself there. On the contrary, from your poor bounty, such as it is, such as it cannot help being, you give it what you have, which is your best. To give it less than your best, to give it the immunity of a closet, is not an essay in freedom. It is an essay in theft. For you require of it what it is not prepared to give, and what even you are only in part prepared to offer, the decision of an informed desire as to where its good must lie. The freedom you have given it is empty, since it is a freedom which it can only defile. It has the freedom to which the poor of the earth are always committed, which is the freedom not to do, but only to suffer and to die.

Whether few or many shall be educated must be decided independently of the question what an education is. The

two questions are distinct, and only to one of them is the university competent to supply an answer. The number who shall be permitted the opportunity of an education must be decided by the separate mandate of society itself. In American society we have that mandate. It is the mandate of a democratic society, that a democracy must make education available to all men, to the *generality* of its citizens.

We are therefore obliged to distinguish a second sense in which education may be said to be general. I for my part believe that most of the basic divisions on the matter of education in a free society are occasioned by an ambivalence of the term between this second meaning, the democratic meaning, and the first, which, for want of a better term, I call the philosophic. The concept of a general education may mean either an attempt to make the diffusion of education general, or an attempt to make the issue of education philosophic. Both meanings are legitimate; in a democratic society both are necessary. Ideally, in a democratic society the two meanings must be complementary. It is the presiding peril of a democratic society that the two meanings should ever be made inconsistent.

The single peril to which, in the conduct of a university, we stand exposed is that either of these meanings should ever be permitted to *substitute* for the other, to suspend the operation of the other.

For if in the interest of making the issue of education philosophic we make its virtue inaccessible even to serious men, we shall make it also ineffectual among them.

And if in the interest of making the diffusion of education general we compromise its rigor, we shall make even serious men defenseless before the very forces in the world which threaten our free society and would extinguish both philosophy and democracy together.

The education of a democracy inevitably exists in the tension between these two meanings. The task which is given

to the fashioners of its programs is to respect both and preserve both.

I leave it to you to decide how well the actual commonwealth has been wrought. I confess to finding my world too heavily populated by Manichaeans who regard civilization as a datum, not a task. A university will not be made by Manichaeans. The idea of a university is a most perspicuous essay in the tasks of civilization, which must always discover balance by discovering the significant elements of counterpoise. A democracy which is intellectually destitute will be led by scoundrels; an intellectuality which is unresponsive to the needs even of the qualified will wither and dry up. If the commonwealth of the university is all destitution or dryness, the fault, proud dust, is yours, for a university is bound by no law except as it gives laws to itself.

VI

As it conduces to the advantage of society that there should be a division of its labors, that one should forge the ploughshare, that another should turn the soil, so in the university men's labors are divided. Though there be an acknowledged common good, such good as they achieve is the fruit of the labors of men who work solitary, and must inevitably work solitary, in all of their distinctively creative acts. That is why in all germinal scholarship and in all germinal science there is an ingredient of art, which the study of others has prepared, which the association with others has disciplined, but which no study or association has ever sufficed to guarantee. Fustel de Coulanges used to tell his students: "Do not applaud me: it is not I who addresses you, it is history that speaks through my mouth." Let it be allowed. Let it be allowed that the historian is a neutral conduit, and that history speaks French. It remains still that there are Frenchmen and drain-pipes through whom no reflective act of the historian is transmitted. What qualifies Fustel to be the mouth

of history is the courage of his solitude, not the word he utters, but the word he impregnates. It is so with all of us. We labor best who labor silently and speak germinally when we speak at all.

Within the university the prime division of labor is the division between the systematic and the historical, between what are customarily called the sciences and the humanities. There is nothing so unprofitable as the inquiry whether historical studies have the virtue of being scientific. It is quite certain that science has not the virtue of being historical. That is a matter of words, and one is free to use them as one pleases, provided only that one uses them to assist rather than to abort one's purposes. The important question is, What constitutes the difference between the one kind of inquiry and the other?

If you abhor toads, you may be assured that you are no biologist. What you ought to abhor is not the toad, but the idiosyncrasy in it, which its brothers fail to share. A systematic inquiry seeks after general truths. The toad which the biologist dissects has no interest for him save as it exhibits the type of which it is a specimen. The specimen itself is expendable. Its uniqueness as an individual is not the object of systematic inquiry. It is a redundancy to which nature is typically and prodigally committed. Therefore, if it be spoiled, it may be discarded, and its place taken by another, which is equally fitted to fill its role as experimental beastie. The aspect which is grasped, the aspect which alone is permitted to solicit interest, is what it shares with others of its kind, and the kind of science which emerges from this interest is a science which consists of general truths, of truths which give information concerning *any* object of the kind in question.

But now consider the interest of the historian or humanist. He characteristically interests himself in unredundant singulars—in the giving of the tablets of the law to Moses,

in Rembrandt's *Syndics of the Cloth Guild,* in the mind of Milton, in the Peloponnesian War, in the rise of capitalist economy, in the segregation of the negro in American society. If he would study Leonardo da Vinci or the Russian Revolution, he cannot find, outside the historical locus in which each of these particulars is set, the object of his reflections. It is all biography—the life-portrait of a man, or of a movement, or of a people, or of an epoch. The singularity of the man or of the movement or of the nation, which interests the historian, is precisely the aspect which the interest of the systematic thinker is content to omit. That is why, between the systematic and the historical disciplines in the university, the gulf seems to be so radical and so impassable. It is our reason for distinguishing the role of the scientist (narrowly so-called) from the role of the humanist, whose science is as real but of a different order.

In order to make the contrast, let the scientist of society and the historian define for themselves a common object, and let each proceed to grasp this object according to his special mode of apprehending it.

In the *Institutes of Justinian* there occurs the following definition of justice (I,1): "Justice is the set and constant purpose of rendering unto each that which is his due" ("Justitia est constans et perpetua voluntas suum cuique tribuendi"). To each that which is his own—that is the sense of the definition. The scientist of society is least of all interested in the circumstance that Justinian's jurists spoke it. He may apprehend the definition simply as a phenomenon, as the jural postulate—the norm—of a society. But the definition will excite his systematic interest as an unusually lucid expression of the general circumstance, that in *any* society—in ours no less than in Justinian's, in Justinian's no more than in the society of the Hopi Indian—what is accounted just presupposes some normative distribution of goods among the members of the society, which it is the

business of law to preserve, and if it be lost, the business of law to restore. This distribution, which the law is designed to define and protect, is the juristic equilibrium of a society. It is what is meant by the justice of that society, that each should have preserved to him that which, in the juristic equilibrium, is his own. In one society and another the portions distributed by title among the members of society may vary. They may be in one society equal, unequal in another. But that is nothing to the principle. Its interest is certified under either of these contingencies. It is simply this, that the principle enables theory to grasp the common juristic lineament of any society whatever.

Any infraction of law in a society may now be represented as a disturbance of its juristic equilibrium. A steals from B. The authorized equilibrium of the society has been destroyed. For A has appropriated to himself the use of a good which is not by right his own. The right remains still vested in B, and it will be the function of the magistrate, if the law be invoked, to restore that distribution which the law has been designed to preserve—to take from the injurer that which he has appropriated without right, and to return to the injured that which is by right his own.

The concept of juristic equilibrium is of the extremest possible importance, for it enables the student of law to grasp what will be in any society the normative feature that presides over its career. Let that feature be once suspended, there can be no understanding at all of the operation of law in society. That is the special virtue of a science, that it provides for this general understanding. Its power resides exactly in its mode of abstraction, in its capacity to omit what, for its purposes, is merely accidental, historical, and contingent. It abstracts from the speciality of Justinian's principle, from its connection with Justinian or with Justinian's lawyers, and fixes upon that general feature of which the principle is an expression.

Very well. That is your scientist of society. What is the historian's distinctive reflection? He sees likewise in the definition its quite extraordinary power as an intellectual tool, which fits it to secure its place in the codification of Roman law, in the reflections of medieval canonists, and in the formation of every system of Continental law of modern times. But his interest is rather beyond than in it. He apprehends in the definition the form of human mentality which was capable of producing it. The definition, as it was the product of that form of mentality, is also its document, as an artist's painting is the document not of a landscape, but of a man. It is the definition in its documentary function that the historian distinctively grasps and interprets. For that form of mentality which was capable of producing the definition is, like all things excellent, a rarity among men and deserves their attention no less than the definition itself. The form of mentality of the Hopi Indian is not competent to that act which Justinian's lawyers performed, and to know the conditions of that act, to seize upon the form of mentality which can generate this intellectual power, is to discover a lesson of humanity of which the sociologist has said not one word. That is why the scientist, who sees no science in history, so desperately needs the historian, that he may see himself. The history of ages and nations of men, whose biography the historian records, is not an idle pottering with things old. It is a conquest of discovery, which ranges before men's eyes the genius of all that is human, which discovers in a poor potsherd, as in the majestic fabric of the Roman Law, the possibilities of the human type, what it has done and what it is capable of. It discovers the Hopi Indian, it discovers the age of Justinian, it discovers the sociologist, it discovers you and me. By that discovery men make their final essay of self-awareness, of that self-knowledge in which alone is wisdom or dignity in their kind. Such self-knowledge is denied to the Hopi Indian for so long as he moves, like bee in hive, under

the secret dominion of institutions and of laws which he inherits but has not, in the dignity of free choice, affirmed. The inheritance which is the sufferance of the bee is the task of the man. For the human type is what dust must labor to inherit, that so this dignity which dust claims may be by right its own.

THE IDEALS AND OBLIGATIONS OF THE SCIENTIST IN THE UNIVERSITY

Richard Schlegel

I

TWENTY-FIVE years ago, as a freshman at the University of Chicago, I attended a literary club lecture given by a fellow student, older and far more sophisticated than I. His thesis was that our age is rushing to destruction, powered by the flow of discoveries given to mankind by science. I remember the figure he used: we are like passengers on a train, carried through the night at high speed on uncertain tracks, perceiving that there will eventually be a faulty rail or bridge that will plunge us into wreck and destruction. I was shocked at the speech. Science to me was mankind's best light, and my own studies were guided and inspired by the wonderful achievements of science. Further, the manifest good which science was achieving, most obviously in its applications in technology and medicine, made it clear to me that the talk must be nonsense.

And yet, today I cannot see but that events everywhere point to the possibility that my friend was correct in his opinion. There is foremost in all of our minds the fact that military uses of nuclear energy give an army of one nation the power to destroy our greatest cities, and very likely our total civilization, in a few hours. A war in which full use was made of existing weapons might actually result in early extinction of man. (How incredible that possibility would have seemed a few years ago!) Already, only from the testing of nuclear weapons, the radio-active isotope, strontium-ninety, previ-

ously non-existent in nature, has been deposited in topsoil everywhere in the world; and now, with the calcium in every glass of milk or bite of cheese, we take some strontium-ninety, with a resulting deposit in human bones that is to be considered hazardous in varying degree, depending on the caution of the authority one consults, but in any event is not harmless to all. Genetic effects of nuclear weapons tests to date have already caused mutations that in coming generations will result, over the world, in the birth of perhaps as many as a million human beings that are not biologically fit—and on this point there is no conflict of authorities.

Aside from the catastrophic effects that we could expect from the uses of science in another major war, there is a suspicion by many of us that as a result of applications of science there has been a deterioration in the quality of the ways of daily life. The multiplicity of mechanical means of communication seems to have brought an over-stimulated life to many, such that in spite of favorable external circumstances they have lost a sense of joy and serenity in living. The doubtful pleasure of mass entertainments is accompanied by a decrease in those leisure-time activities that require more than passive participation. Even our food, processed and packaged and preserved as if its organic nature were to be disguised, may not be as tasty and nourishing as was the fare of our grandfathers.

Changes in ways of daily living are perhaps chiefly matters of individual taste and should not be stressed as indications of harm resulting from uses of science. But one further point is clear: as a result of applications of science, human population is growing at an unprecedented rate, with resultant destruction of natural resources of all kinds and without any apparent concomitant increase in the quality of man. We may already have well passed the optimum human population density for our earth, and in any event there must eventually be a limit on mankind's total number. The popula-

tion problem is probably the hardest one of those that are among the legacy of applied science, and it will have to be met, with all its implications for religious dogma, national pride, and personal freedom.

II

At this point you perhaps expect that my answer to the question of what are the obligations of the scientist in a university might be, "For Heaven's sake, get out—go to a remote island with your science, if you must have it, and leave the rest of us in health and comparative peace." But of course this is not to be my answer. For balance, we must look at the desirable as well as the unfortunate results of the applications of science. Our lives have in numerous ways been made more comfortable and humane by technological advances. The victories over disease and pain by medical science give wonderful gains in the happiness that people may find in their lives. Scientific direction and use of natural phenomena do give mankind a possibility for a society in which there is plenty for all, with brutish labor required of none. The 19th-century vision of a world made perfect by science, at least as far as material conditions are concerned, was a valid and proper vision; its great defect was only that it was incomplete, with neglect of the harm that might be done by the same knowledge that could be so life-enriching.

To those of us who are concerned with man's intellectual life, the content of science is generally more important than its applications. We find little indeed to condemn, and much to praise, when we consider the scientist's contribution to our understanding of our world. It is often pointed out that the art, the religion, the literature, and the political and social forms of our age are not notably superior to selected counterparts in other cultural periods. But in science, our culture—by which I mean the civilization of the Western nations since the medieval period—has produced a body of

knowledge that is the glory of our age. The scientific achievements of the Greeks and Arabs, for example, were not trivial, and our science rests on foundations built in other ages. But the science of the Western world has so far surpassed that of preceding eras that we feel a sharp discontinuity, because of differences in scientific achievement, between ours and other cultures. And Western science, because it is at least in part faithful to nature and not to the assumptions of a particular cultural group, has now spread over the entire world, and is everywhere man's instrument in exploring his world and himself.

Scientists have given man knowledge that transcends the limitations of immediate sensory experience. By use of inference, extrapolation, logical systems of high complexity, imaginative theoretical construction, and elaborate devices for experiment and observation, scientists have to an amazing degree comprehended the nature of things. New mysteries, it is true, have always appeared with new discoveries, but nonetheless what has been achieved is justification for man's continuing the enterprise of science with the highest hopes for the understanding of nature that he may gain in the future. We have carried our knowledge of matter through the discernment of chemical elements to the molecular-atomic hypothesis, thence through the structure of atoms, and now to the most elementary particles of matter and their relation to the matrix of space and time in which they are formed. Biologists have come to understand the evolution of species with the long processes of generation after generation, and have proceeded from descriptive accounts of biological functioning to understanding of many biological events in terms of their detailed chemistry and physics; even the problem of how one seed can transform itself and the food given it to a mature organism, with the constitution and instincts of its progenitors, is beginning to yield to the hard work of the biologist and biochemist. The

immensity of our universe has been revealed, and the question of its over-all structure has been reduced to plausible alternatives; even within a decade or two the methods of physics and astronomy may give a definite decision. The psychological and social sciences have not as yet had the dramatic successes of the natural sciences—perhaps in part because they have not yet been given a sufficiently complete biology of man on which to base their studies—but they have made the not inconsiderable achievement of bringing to the problems of human behavior the approach of science, with its suppression of *a priori* judgment, its concern for fact, and its appreciation of the role of hypothesis and theory.

We cannot justifiably say, dogmatically, that science is the only possible way of gaining new knowledge of our world. But if we consider other methods that have been tried—religious inspiration, say, or mystical intuition, or speculative system construction without regard for sense experience—we inevitably come, it seems to me, to the conclusion that science provides far and away the best lead that we have for understanding nature and man. Scientific knowledge has a hard base in observation and a rigorous structure in its logic and mathematics, such that it can be taught to any rational being, and that it gives definite information which does tell us, in concrete events, how natural processes will go and how they can be shaped as we desire. And yet, and in contrast to most of the knowledge gained in other ways, good science is always tentative in its basic assumptions and in its statements that go far from what has been firmly established. "The files are never closed in science," it is commonly said. Scientific knowledge is next to certainty with respect to the domains of nature where fact and theory have been confirmed, but there is always the possibility of exploring new domains, with resulting novel facts and profound changes in theory; the old theory is not then overthrown but remains as a special and limited case of the new.

III

Having considered some of the desirable and undesirable aspects of science, I now want to turn to the specific topic of the scientist in the university. The first point to be made is that I think the major role of the scientist in the university is to be a scientist in the highest sense of that term. Universities are not primarily schools for professional training; or agents for social, economic, or personal improvement; or centers of research and information for various specialized groups of society. It may be desirable that a university carry on one or more of such kinds of activities, but I do not think the university can properly do any of those things unless it is also fulfilling its primary function. That function I conceive to be the seeking of knowledge, and the appreciation, evaluation, and dissemination of knowledge. To the university man, knowledge is the great treasure, sought because of man's need for and appreciation of it, and taught to others in the faith that knowledge will make a better man or woman. I well know that not all knowledge is of equal significance. Research is sometimes little more than habit, without intellectual content or practical use, and the chronicling of the history of each stone of the countryside can be mere pedantry; but it is the task too of the university, as far as possible, to distinguish between knowledge that is significant and knowledge that is not.

The scientist in the university must, then, be aware of what science has contributed to our understanding of the universe, and must be concerned with maintaining that understanding and teaching it to others. He should also be striving to refine and extend understanding, which is to say, he should be actively "doing science" himself. With such a group of scientists, the university comes to have the kind of atmosphere in which faculty and students are inspired to pursue critical study and zealous research; there is then

established a university center at which science flourishes.

It is particularly important for us in the United States to be concerned with the scientific activity of our universities. I cannot speak for all the sciences, but I suspect that there is for them the same situation that obtains for my own specialty, which is physics: to wit, that our country has done considerably less than its share in basic scientific work. Modern physical science gained its foundations chiefly in a few universities of northern Italy, in the 16th century, and its great succeeding development was carried on at a relatively small number of centers in northwestern Europe. In theoretical physics, which is perhaps the basic field of science, there has been only one American of major importance, Josiah Willard Gibbs, who was professor at Yale from 1871 to 1903. Some figures gathered by Jane B. Blizard[1] on the 115 Nobel Laureates in physics and chemistry during the period 1901-1952 are of interest in this respect. The rank of countries in order of numbers of Laureates per million of population is: Switzerland, Sweden, The Netherlands, England, Germany, France, the United States, with a factor of five between the first and last country. Using a list of scientific discoveries and inventions, Miss Blizard found the order of countries based on contributions per million population to be The Netherlands, Germany, Switzerland, England, France, Sweden, and the United States, with a factor of three between The Netherlands and the United States. She found relative scientific productivity to be in sharp contrast to the prevalence of higher education: per college graduate, the cited European countries contributed approximately fifteen scientific discoveries and inventions for each American contribution.

I do not wish here to enter into speculations about why our national record is so comparatively poor in the basic sciences, except to say that I am not impressed by the argument that our nation has been too busy with occupying a

[1] *Physical Review*, **93**, 364 (1954).

continent to do science. There was considerable scientific activity in our Colonial period, and what is probably the high point to date of American literary and philosophic activity occurred in New England in the 19th century, at a time when as a nation we were very much concerned with the western frontier.

It does seem to be the case, at least in physics, that the American situation is now changing. The social and political events in Europe in the 1930's sent to our shores many of the world's foremost physicists, and perhaps their presence in our universities has given American fundamental science an impetus which will result in our maintaining a role in science consonant with our population and resources. If we are to do this, it is of first importance that our universities truly be centers for the pursuit and appreciation of science in its own right. Our public universities have a responsibility in this respect that has by no means always been honored; for the pragmatic temper of the American people has often resulted in our universities' giving staff members time and funds for applied science, but not for basic scientific research. The first priority clearly should be for fundamental science in a university. The university betrays itself in an essential activity if it honors application of science above gaining of scientific knowledge, and that betrayal spreads to other departments of the university; for if scientists are not practicing science for its own sake they will not be re-enforcing the general university spirit of living for the acquisition and enjoyment of knowledge.

There is also, of course, the important fact that in practice applications of science rest on scientific knowledge obtained without regard for possible application. In recent years this fact has come to be recognized by government and industrial leaders, who speak of the need to support basic science, so that there will be a fund of knowledge from which applications may grow. There is, however, something that is at least

in part false and self-defeating in this argument for support of science. Scientists are not likely to refuse any support which is given to them on this basis, and it is the case that generous financial aid has been given, for example, to physics in recent years, because of an expected ultimate harvest in useful military and industrial applications. But I think that the successful pursuit of basic scientific knowledge rests ultimately on there being a tradition of desire for and appreciation of knowledge. Modern science did not spring from barren ground; it came as a direct descendant of preceding science on the one hand and of medieval scholastic philosophy on the other. The importance of medieval philosophy as progenitor is that it had developed a powerful tradition of concern with knowledge for its own sake and a set of canons for rigorous thinking. Furthermore, I think it is no accident that the flourishing of science in the modern period in Europe has also been a period of interest and creation in technical philosophy generally, misguided as we scientists think much of that philosophy to have been. Basic science is an integral part of the intellectual and emotional life of man; and unless there is a significant group in a society with genuine, impersonal interests in philosophical questions, I do not believe there can be significant scientific activity.

Finally, on the matter of the scientist's first obligation to the university it should be pointed out that the establishment of interest and activity in the basic sciences is by no means altogether the responsibility of university administrative officials. Administrators have an essential role to play, in providing time and money, but they are usually beyond their days as active scientists, or may have never been educated at all in science. The scientist must himself be a center, however small, for interest and activity in fundamental science. And in general it is probably the case that he must lead the administrator, rather than the other way around, in the support and encouragement of basic science.

IV

A second obligation of scientists in universities is to guide and initiate desirable applications of science, in the various matters of daily living, medicine, agriculture, technology, and social-economic practices where science can contribute. In all, this aspect of the university scientist's work has perhaps been more successfully carried out in the United States than in any other country. While emphasizing the priority of fundamental, non-applied science, I do not wish to convey any lack of regard for the importance of applied science; anyone who has lived in Europe can come to realize how much some of those countries, in spite of their superb university traditions in pure science, could profit—to give one example—from a home economics department and extension service of the kind that we have in our land-grant colleges and universities. The point is just that fundamental science, carried on for its own sake, is prior to applied science in the concept of a university. There is also a logical priority for pure science in that it is obviously a necessary prerequisite for the existence of applied science. There is good reason to maintain both kinds of scientific activity in a university, but I think our emphasis in this country has tended to be too much on applied science.

The distinction between pure and applied science is not always sharp, but this fact does not make the distinction invalid where it can be made. The question might be asked, whether it is the obligation of any one scientist both to carry on scientific work that is done without concern for application and also to work in possible applications of science. I think the answer clearly is No. To make a significant contribution either in pure science or applied science alone is surely adequate justification for a scientist's work. I would make the reservation here, that one would hope that those working essentially in an applied science would have appre-

ciation for the achievements of pure science; I think that very commonly they do. Also it is often the case that those who are actively contributing to our fundamental scientific knowledge do also show interest and concern in the development of applications of science.

V

I now wish to return to the problem of the destructive and otherwise undesirable applications of science. What is the obligation of the scientist with respect to those uses of science that have brought our species to what in historic times is far and away its day of greatest peril? The scientist has, of course, the obligation that every thinking citizen has, to exert his pressure for a just world order that can enforce a ban on nuclear weapons, and generally to use as good sense as possible in the utilization of the machines and processes that applied science makes available to us. But beyond this is there a specific obligation for the scientist in the university *qua* scientist? This is not an easy question to answer, although I think that some of the answers which have been suggested at various times can readily be shown to be unsatisfactory.

One proposal is that we should have a moratorium on science. This is an extremely foolish idea. Science, as has been often said, is an extension of common sense, and we cannot expect that people are going to stop using as much sense as they have in solving practical problems or in answering the theoretical questions that reflective people ask themselves. Further, we must not forget that science is a basis for human improvement as well as deterioration, and if we suppressed science we would be suppressing many of our hopes for the future. We must accept the fact that mankind in developing scientific methods has set out on a new and adventurous course. The journey is exciting, and far more hazardous than we realized a few years ago; but its possible rewards continuously grow beyond our hopes of yesterday. To give up

the journey and deliberately return to the safe haven of a pre-scientific age, is, I think, counter to our best instincts (as well as being without feasibility); rather we must run the course out, trusting that our reason and maturity will be sufficient to enable us to avoid the disastrous hazards along our way.

Another suggested answer to the problem of the dangers of applied science is that scientists must themselves guide their own work into fields that have only desirable applications. It is, however, not generally possible for a scientist to know what will be the consequences of his work. This is particularly true with respect to work in basic science which is done for its own sake rather than with regard for possible applications. Since the scientist usually does not know how the knowledge that he gains will be applied, if it is at all, a proscription of science that has undesirable applications would in effect be a ban on all fundamental science. Likewise, even with many applications of science, it is not possible to foretell what the consequences of use will be. The various chemo-therapeutic agents, which seem so clearly beneficial, may conceivably in the long run lead man to poorer health by maintaining the lives of persons who do not have adequate constitutional immunity. Nuclear fusion energy, which now seems to be disastrously perilous to us, may supply the energy that will enable our civilization to continue after fossil fuels are exhausted.

Still, I do not believe that the impossibility of always knowing what are the consequences of a given piece of knowledge should be a license for scientists to be altogether heedless about the results of their work. In some instances of applied science there are immediate undesirable results to which the scientist can hardly close his eyes. To take an extreme case, a group of physicists who sold their service to an unscrupulous political adventurer, so that he could arm himself with nuclear weapons and engage in large-scale piracy

or blackmail, would scarcely be able to justify themselves on the grounds of not knowing the consequences of their applied science.

In practice, it seems usually to be the case that there are valid reasons both for and against a given application of science. During World War II most scientists in the United States who worked on the atomic bomb felt a sense of horror at the possibility of its use, but justified what they were doing on the grounds that it was far better that we have the bomb than that it be controlled by the madman Hitler. In the end, the Germans were defeated before they constructed a bomb, and the Japanese were already close to defeat when nuclear bombs were exploded at Hiroshima and Nagasaki. As far as the War's outcome was concerned, there was no need for the bomb. On the other hand, one could argue that eventually some country would have applied nuclear physics to the construction of a bomb, and the world would sooner or later have to face the problem of avoiding the nuclear warfare that is now with us. I think, however, that in general there would be a gain in the world's welfare if scientists were more hesitant than they are at present about working on applications that contribute to the inhumanity of our age. Many have refused to undertake such work, and we should honor them for their refusals. To be realistic, however, we must recognize that scientists are as varied as other people in their ethical and political viewpoints, and are not likely to constitute themselves as a group which will save the world from disaster by withholding their services from military scientific developments.

But there is one respect in which scientists have a clear and reasonable obligation, and that is in using their science to learn as much as they can about the undesirable consequences of a given application, and giving wide publicity to those consequences. Thus it is important that scientists learn all that they can about the dangerous effects of radiation, in a

world which is using increasing amounts of radio-active materials. The introduction of any new biological agent should be accompanied by as complete knowledge as possible of all effects of the agent. I think that scientists have by no means always met this obligation. There is the very important point to be made, that in the long run scientific knowledge does tend to correct the harmful effects of applied science, just by making explicit what those effects are and providing the means of removing them. Some fifty years after the invention of the automobile we are learning, in the Los Angeles smog, that automobile fumes are not completely harmless. The technology which has placed a package of cigarettes per day in the hands of almost every man, woman, and older child in this country is now being overtaken by the findings on the medical effects of cigarette smoking. The scientist, pure or applied, does perhaps best serve mankind by being as thorough a scientist as possible. In current practice there is, however, the unfortunate fact that there is often a considerable lag between the introduction of products made possible by science and the gaining of information about all effects of the use of these products—and during that interval many people may suffer deleterious consequences.

The view is sometimes expressed that the way of avoiding the harmful effects of applied science is to increase the amount of education in the humanities which is given to students. The notion seems to be that in the sciences a person learns techniques, and in the humanities how to use them for man's welfare. But I think there is very little justification for this point of view. I do not see how any thinking person can be other than in favor of everyone's gaining as strong an education as possible in the humanities. (By such an education I mean an acquaintance with achievements in literature, philosophy, and the arts, and with man's social and political history.) The history of science, too, should receive more emphasis than it generally does. But, broadly speaking, the

professional humanists are not the intellectual leaders of our culture today, while the scientists are. The changes that are occurring in our general outlook, in ethics, religion, metaphysics, as well as the changes in technology, are coming from science, not from studies of literature or art. The effect of psychology on our sexual codes, or of physical science on our credence to dogmas of Christian fundamentalism, are examples of the effects of science on our ethics and religion. The vital centers of cultural change are in the sciences, and it is through his scientific education that the university student will best gain understanding of what are the currents of change in the world, and of how those currents should be directed. The humanities should contribute breadth and perspective with respect to the problems that we face today, but I believe that scientific knowledge is itself the primary weapon in solving these problems.

VI

In summary, I would say that the first ideal of university scientists should be to appreciate and to further scientific knowledge, pursued for the answers that it gives to questions about the universe and ourselves. It is also an obligation of scientists to honor and encourage the applications of science to the practical activities of man. The proper use of the powers of applied science depends on the wisdom of people generally, but scientists do have the obligation of learning and reporting as much as they can *as scientists* about the consequences of a particular application.

In stating ideals and obligations I have not indicated a dependence of scientists on any intellectual activity other than science itself. I have not done so because I believe science is today the sovereign intellectual activity. It is the most successful road that philosophy has found; it is the major factor in the improvement of our conditions of health and living; and it even is, I believe, essentially the religion of our

day, as a source of truth and security to most educated people.

But, finally, having made the preceding statement, I feel that there would be an important omission if I did not change it somewhat. I will qualify it by saying that the statement proposes, I think, a "great truth." I now draw on a distinction that has been made by the most respected of living physicists, Niels Bohr of Copenhagen. There are, asserts Bohr,[2] two kinds of truths: minor truths, whose opposites are plainly false, and great truths, whose opposites are also true. If I say that the most probable radius of the electron orbit in a normal Hydrogen atom is 5.3×10^{-9} cm., that is a minor truth, for its opposite is false. If I tell you that "Man is a Machine," that is a great truth, and because of ambiguities in the words used its opposite is also true. And so, when I assert that science is today our philosophy, our livelihood, and our religion, I believe I am asserting a profound truth, whose opposite is also true. For science alone would not give us man, or his desire to do science, or to improve his lot. There is always a wisdom and a love for humanity and for living which is not in the explicit structure of a science or a discipline. The scientist in the university, equally with his colleagues, the humanist and the artist, has the obligation to perceive what he can of that wisdom and love, and to tell of it to his fellows.

[2] Reported by J. A. Wheeler in "A Septet of Sibyls: Aids in the Search for Truth," *American Scientist*, 44, 361 (October, 1956).

THE ROLE OF THE ADMINISTRATOR IN THE UNIVERSITY

Thomas H. Hamilton

TO BEGIN with a reservation, I may say that the role which I have been asked to delineate in this series of papers I have found to be as difficult to describe as to execute. An ideal presentation would perhaps be at once descriptive, analytical, and normative. But such a task presents difficulties which I am not now prepared to undertake, and I shall content myself for the present with venturing to provide a few insights, trusting that they will be suggestive if not systematic.

There are also other difficulties. How, for example, does one distinguish between the ideals and obligations of the administrator and the ideals and obligations of a man? As Dylan Thomas said about the poet: "A poet is a poet for such a tiny bit of his life; for the rest, he is a human being." Nevertheless this is not to suggest that a man is not a human being when he is playing his role as poet, or as administrator. Indeed I wish to call attention to certain human qualities which seem to me indispensable to a man as administrator.

Before I begin, I should place certain qualifications upon my remarks. My observations, and such insights as they may furnish, are limited to administration in the large, complex public institution with many curricula on many levels, and with students and staff by the thousands. I confine myself also to that type of administration which frequently is spoken of as "central," that which deals with a function which is university-wide in scope. Finally, I hope that I may not confuse explanation and justification. I am sure it is not my task here either to justify or defend administrators or administrations

—some I couldn't defend; those men who do their job well need no defense from me.

I. The Context

I choose to start this discussion, then, with a consideration of the context within which the administrator must work. I do this because it reveals some of the perplexities involved in administration and explains perhaps why sometimes the university administrator may appear to vacillate between conflicting positions. I know of few other administrative posts in our society in which the demands of the context are in a way greater, the segments of it so frequently at odds one with the other, and the possibilities of truly measuring success so limited.

Let us start with the problem of the legal responsibility of the administrator. Either directly or indirectly through his superior, this responsibility is to the governing board of the university. As far as law is concerned, this is really the only responsibility he has; this board has the authority at any time to cause him to cease to be an administrator, a position in which, regardless of his status as a faculty member, he has no such thing as tenure. It would be well, too, to recall that the custom in the United States is for these board members, however selected, to be non-professionals. One can, of course, argue the merits of the method by which our universities are governed, but the important part of our present discussion of context is to point out that a fair part of the administrator's time and energies must go into the interpretation of difficult technical problems and professional practices and points of view to individuals in whom are vested the powers of governing the university and who, regardless of their wisdom and devotion, are not themselves technicians or practitioners. While this is both time-consuming and difficult, a fair part of the effectiveness of any administrator surely depends upon the success with which it is done. It is also a function which

seldom comes to the attention of faculty or students or the general public.

But any administrator who is worth his salt knows that his responsibilities are more than strictly legal in nature. He recognizes a professional responsibility to the faculty. This responsibility manifests itself in many ways—from the formality of conducting the personnel responsibilities within approved tenure policies, to the informal preoccupation with helping to provide the appropriate climate for intellectual activity to take place.

And of course there is a responsibility to the students. Both faculty and administration share this responsibility. The particular responsibility of the central administrator, however, as it relates to students, might be said to be general as opposed to special. I do not mean to imply that all faculty responsibilities to and interest in students are special and individual in nature. Such is certainly not the case; but sometimes it is, and when it is, the administrator has the responsibility to see the problem in the whole and try within the very great limitations which surround him to give consideration to the welfare of the student in its totality.

Whether or not to define the relationship between the administrator and three other groups as a "responsibility" is a moot question. But certainly they are important constituents of the context with which the administrator must cope. The first of these is the alumni. It is by no means necessary that the alumni like or necessarily approve each of the acts of any given administrative official, but they must be convinced that he is trying to help the university reach reasonable goals and is reasonably effective in doing so. Similarly, while the legal responsibility of an administrator is discharged through his relationship with the governing board, in a public university there is constantly the necessity of dealing with members of the executive and legislative branches of the state government. Here again the problem is not neces-

sarily to respond favorably to all demands but rather to establish a reputation for honesty, competency, and reasonableness.

Finally, in the context within which the administrator works, there is a factor which I am tempted to call "the public," though this term probably would be inexact, since the public as a whole is a remarkably inarticulate body. I suppose it would be better to say that there is a collection of interest groups with whom the university administration must deal and to whom there is the constant necessity for interpreting the nature of the university. This is a relationship which has increased in range and intensity in great proportion over the last quarter of a century and now consumes a great deal of any administrator's time. The reason for this is fairly obvious. In the days when universities were small, dealing with a limited number of areas, and costing the constituents relatively little, the number of interest groups which felt they had a stake in higher education was small. But as curricula have increased in number and broadened in the nature of their concern, as the enterprise has become larger and consequently touches upon the lives of more and more people, and as the costs of the enterprise to the constituents have risen, so the number and range of interest groups which impinge upon this multi-dimensional institution have multiplied.

It would sound as though, in view of the nature of the context which I have but sketched, any administrator would be certain either to have to be at the outset or subsequently to become one of the most "other-directed" persons in our society. But it has been my observation that those who try to satisfy all of these demands all the time are not very successful. There must be some platform on which the administrator can stand and from which he will not be moved in principle. This, I think, involves the administrator's understanding the nature of higher education in general and hav-

ing a commitment to a position in regard to it. In addition to this general philosophy, he must have a thorough understanding of and a commitment to the philosophy of the particular institution which he is serving. Given these as a foundation, and hopefully possessed of some skill in dealing with problems which result from the interaction of human beings, he may have a chance of carrying off his assignment successfully, of making at least some contribution to the purposes of the university, while still maintaining a measure of independence and self-respect.

An earlier paper in this series made what seems to me a very apt observation to the effect that an administration is like a woman—it can provide the conditions of birth but can't do it alone. Certainly an administrator must recognize very early that whatever contribution he makes to the university must of necessity be indirect in nature. The effectiveness of the teaching function of the university, wherever this function may take place, can be measured only by the growth of students in the desired directions, and the administrator can have no direct part in this process. Similarly the administrator—again as administrator—does not participate directly in the realm of scholarship. Under this double proscription, the administrator's rewards also are always indirect and in my own experience at the very least of quite a different order from those of either the teacher or the scholar. But this is an alternative which he must accept when he assumes the role.

This indirectness both of participation and reward frequently can develop in the administrator a feeling of considerable professional insecurity. For the longer he practices the art of administration the more remote he becomes from the skills of teaching and scholarship which he knows are primary to a university's well-being. David Starr Jordan, who after establishing a reputation as an outstanding ichthyologist became a university president, is reported to have replied

ruefully to an inquiry as to how he enjoyed his administrative position by saying, "Every time I learn the name of a student I forget the name of a fish."

II. Facilitation

We sometimes speak of the process of administration as though it were a unified whole. Perhaps it is. But it seems to me that the process as far as universities are concerned is somewhat clarified if it is recognized as having two complementary faces. One of these I shall discuss as facilitation and the other as the provision for educational leadership. The duty of the administrator in the first instance, I would contend, is to be a good craftsman, and in the second, to try to be a wise man. Let me discuss first this function which I have spoken of as facilitation.

I have from time to time had occasion to remark that administration is necessary but not important. When I have made this statement it is the facilitation function to which I have had reference. Of course it is just possible that something that is necessary may become so necessary that it is important; this is a point over which I have no intention of quibbling. Perhaps this function of facilitation can be described as that which makes it possible that all of the necessary resources shall be present at the right place at the right time in the right order to achieve a legitimate university objective. This seems, I suppose, rather obvious and somewhat pedestrian, but all that has to happen is for this process *not* to operate in order to demonstrate how necessary it is. At the very simplest of levels, one can be critical of the amount of energy which is required to make sure that a faculty member, his students, his class cards and other necessary accouterments all show up in the same room at the same time on the same day—but just imagine the chaos that would result if this were not the case. Similarly, regardless of what value one may accord to purchasing, or how well one may feel that

a given system works, there is still something very necessary, and to me in a way miraculous, that with the acquisition of some three or four signatures on a piece of paper (in quadruplicate, of course) all kinds of equipment and materials originating from all over the world show up relatively constantly in the right place, at the right time, and in the right quantity and quality. One might elaborate this aspect of the administrative process, but perhaps these few illustrations will serve to illuminate it sufficiently.

I have said in this connection, it is the duty of the administrator to be a good craftsman. Furthermore, while I would deny that the administrator's role in total can be taught directly, it is in this realm that I think much can be done. For this phase of administration rests on a body of principles, some of which are reasonably well established and others of which are not. These principles, incidentally, are by no means exclusively of the order involved in such things as delegation, decentralization, and unity of direction. The more important ones have reference to the nature of human beings in a bureaucratic situation. By this I do not imply that the administrator should learn tricks by means of which he manipulates individuals; on the contrary, this is the work of a poor craftsman. But the able administrator will soon learn that human beings perform their duties better if they are convinced that the organization of which they are a part has respect for their dignity and a realization of the importance of their work.

These administrative principles can be studied and learned, although the successful application of them will of course be influenced by the quality of the applier. The real difficulty in providing learning experiences in these areas for university administrators is that quite properly, I think, most people do not prepare themselves directly to become university administrators and are selected for other reasons. To provide a young graduate student with an extensive

number of courses in administration probably is futile. Therefore most of the learning of craftsmanship in this area has to be in-service in nature and largely, I would suspect, self-learned. I would only plead that there is a body of knowledge available in this area which any university administrator should be aware of and assimilate.

III. Provision for Educational Leadership

The function of facilitation which I have just described is, I think, so necessary to the university that the able craftsman in that area can almost justify his existence on that ground alone. But there is another face of the administrative process, as we know it in the universities in the United States, which is more important, and the capacity for dealing with it probably less widely distributed. This I prefer to call the *provision* for educational leadership. You will notice that I have not simply said educational leadership, for this would imply that the administrator must himself furnish this leadership, and I think this is a notion which no longer has much application. When universities were smaller and less complex, we did see examples of institutions which, for better or for worse, were indeed the lengthened shadow of a single individual, but I strongly suspect that this day has ended. The range of knowledge in fields with which the modern university must deal is so great that no one but a fool would think himself competent to deal with all its parts. The most that anyone can do, operating again from the security of a commitment to a philosophy concerning the nature of university education in general and the institution with which he is affiliated in particular, is to try to so arrange the environment that the educational leadership in various areas will be provided by those who are competent to give it. In so doing, he will have to avoid all kinds of stereotypes, either in feeling that all competence is vested in the faculty, all in administration, all in the students, or all in the governing board.

He will recognize that the diversity of areas calls for the recognition of the diversity of competence.

I have said that the ideal here, then, is wisdom. In contrast with the remarks I have made about facilitation, I am sure that this cannot be acquired in any formal way. As a matter of fact, I have no really firm idea as to how wisdom is produced, or even any confidence that I can recognize it without fail when it has come into being. I only know that it is important.

Many of the difficulties in administration arise, of course, when someone is selected for a position of administrative responsibility who turns out to be neither a good craftsman nor a wise man, or who, while a good craftsman, refuses to recognize his limitation as far as wisdom is concerned, for administrators have no more ability as a group at self-evaluation than do other people.

We have, I think, unfortunately, developed a situation in higher education that makes it difficult for us to get the wisest of our people interested in the total administrative process, for few of us, really, are able to recognize or are willing to admit the potentiality of administrative work well done. Whatever may be one's opinion about the way in which American universities are administered and controlled, the hard fact remains that within the present extremely complex framework the administrator, even though his role be in a sense secondary, can be vital to the success of a given university. Yet I am not sure that our profession—being oriented toward scholarship and teaching—has granted this fact. I find that I am prey to thinking in stereotypes in this regard. Not long ago the president of a small college, a personal friend, wrote me saying that he had on his staff a young man who wanted to become an administrator and asking whether I would be willing to try to find a place here for him where he could get some experience. My first reaction was, "I wonder what's wrong with him?" I doubt

that when administrators themselves react in this way, let alone faculty, we have produced an environment which will encourage the wisest of our people to see that they can make a contribution to higher education through an administrative role. Surely we would all do well to reflect on Dr. Taylor's reminder that "It is the saint, not the saint's leg bone, that is holy."

To summarize then, the administrator must work in a context which is characterized by diversity and frequently conflicting demands. It is a context which, if one copes with it successfully, requires an expenditure of a great deal of intellectual, physical, and emotional energy. Within this context he must, if he is to do the total job, perform two kinds of function, that of facilitation or the matching both in time and space of resources and needs, and that of the provision for the educational leadership in the functional area which is his responsibility. He provides these not directly but through the identification and encouragement of those capable both by ability and training to provide such leadership as relates to particular requirements. In the first case, his duty is to be a good craftsman; in the second, to be a wise man; and above all to have sufficient humility to recognize his personal limitations.

LITERATURE AND PHILOSOPHY: A VITAL RELATIONSHIP

B. R. McElderry, Jr.

I

WHAT IS LITERATURE? There are several ways of treating this question. You can explain that literature, broadly speaking, is anything written, and therefore includes such items as almanacs, medieval laundry lists, tax records, and Hamlet. To such an explanation it is usually added that Hamlet is quite different from the other items, medieval laundry lists, for example. But since everyone *knows* this, I shall not develop it further. I shall go at once to the Hamlet kind of literature. I shall say that literature is the imaginative use of language. I am aware, however, that this statement will not satisfy. There is already formed in the reader's mind the guileful question: what do you mean by imaginative? what *is* imagination? This is a thorny question, but I shall not take refuge in the witticism propounded by Professor H. W. Garrod of Oxford when he said: "If we knew what the imagination was it would not be what it is." Without pursuing the endless controversy over this term, I shall simply say that the imagination is the individual capacity to enrich experience. This enrichment of experience comes about in several familiar ways. We associate one object or experience with another: we speak of a *star* athlete when we mean a good one. We also combine and rearrange our experience in order to develop a unity in it. A novelist observes a dozen soldiers, takes traits from each of them, and combines these traits into a fictional character representative but different

from any one of the dozen actual soldiers. Again, the imagination will arrange the words which communicate the idea—a fictional soldier, let us say—in such a way that it intensifies its meaning. These are all familiar processes. Possibly others could be added, but these are sufficient to suggest what we mean when we say that "literature is the imaginative use of language."

Let us look briefly at an illustration, a poem, entitled "Catechism." It is not, perhaps, a great poem. I have never seen it in an anthology. It is, I think, a good poem, and since it will be unfamiliar to many it will serve our purpose. I first read this poem in London in 1944, in the pony or overseas edition of the *New Yorker*. In a world filled with soldiers and columns of print about them, these simple lines seemed important. I know nothing of the author, but I have read the poem many times since, and it continues to be for me an imaginative statement of an important idea.

CATECHISM[1]

Edward Fenton

What is your name?

A number.

Where is your home?

A place
I cannot now remember
with a calm face.

What is your station?

Under
the bronze voice of command,
irrevocable as thunder,
I move as planned.

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Where are you bound?

Wherever
the ship I board is sent
and lands me to deliver
your testament.

What is your faith?

One called it
a long word from a book,
though I, who must uphold it,
forget its look.

(But I see clear the faces
of those I leave behind,
and the outlines of lost places
cling to my mind.)

How long will you serve?

Forever,
if need be.

While you live
what pledges do you render?

All that I have I give.

. . . Yet all the world's abounding
words cannot decrease
my wonderment unending
as death, my sole release,
buys your salvation: peace.

As we read this poem, we must recognize that it is not partisan, not propagandist. It could speak for a German or Japanese as readily as for an American. "The bronze voice of command" is the essence of soldiering, ancient or modern. Even a pacifist might like this poem, for he could read it in the light of his own persuasion. The poet has in Henry James's phrase, "caught the color of life"; he has revealed the essence of something. This kind of insight, says Emerson, "is

a very high sort of seeing, which does not come from study."

A short poem is a convenient way to illustrate the literary process, since the whole work, the interrelated parts, can be kept in view. A drama, or a novel, or a long poem, will show the same fundamental literary processes. Take G. B. Shaw's *Saint Joan* as an example. Despite all the records of history that bear on her career, Joan of Arc remains a very mysterious and unaccountable person. How can you explain a young girl's accession to successful leadership of a 15th-century army, and how can you explain her eventual death at the stake? Drawing upon his own experience of human nature, Shaw *imagines* the career of Joan in terms of plausible motives. In the fifth scene, Joan lingers in the cathedral after the crowning of the Dauphin as King Charles. She talks with her young general, Dunois:

> *Dunois.* Come Joan! you have had enough of praying. After that fit of crying you will catch a chill if you stay here any longer. It is all over: the cathedral is empty; and the streets are full. They are calling for The Maid. We have told them you are staying here alone to pray: but they want to see you again.
>
> *Joan.* No: let the king have all the glory.
>
> *Dunois.* He only spoils the show, poor devil. No, Joan: you have crowned him; and you must go through with it.
>
> *(Joan shakes her head reluctantly.)*
>
> *Dunois. (Raising her)* Come come! it will be over in a couple of hours. It's better than the bridge at Orleans, eh?
>
> *Joan.* Oh, dear Dunois, how I wish it were the bridge in Orleans again! We lived at that bridge.
>
> *Dunois.* Yes, faith, and died too: some of us.
>
> *Joan.* Isn't it strange, Jack? I am such a coward: I am frightened beyond words before a battle; but it is so dull afterwards when there is no danger: oh, so dull! dull! dull!

Dunois. You must learn to be abstemious in war, just as you are in your food and drink, my little saint.

Joan. Dear Jack: I think you like me as a soldier likes his comrade.

Dunois. You need it, poor innocent child of God. You have not many friends at court.

Joan. Why do all these courtiers and knights and churchmen hate me? What have I done to them? . . . I have brought them luck and victory: I have set them right when they were doing all sorts of stupid things: I have crowned Charles and made him a real king. . . . Then why do they not love me?

Dunois. (Rallying her) Sim-ple-ton! Do you expect stupid people to love you for shewing them up?[2]

In such a conversation Shaw imagines the words he thinks the situation would motivate. We may, for various reasons, not accept the scene as he has imagined it, but nevertheless he has associated the vague historical figure with such a natural feeling as the sense of dullness in a period of inaction, and with the interesting hypothesis that despite her dynamic character Joan may have been guileless and naive. These imagined possibilities are combined and arranged so that our awareness of the historical figure is intensified—provided, of course, that we do not, because of superior knowledge or prejudice reject the whole supposition. The association, arrangement, and implication of the details are as evident in this little scene as in the poem. If we followed Shaw through the whole play, it is true, we should feel more of a design upon us, more of a propagandist effect than in the poem. This distinction is incidental, however. Whether Shaw's play is literature or propaganda, it certainly makes use of the literary method. It is imagined story, not historical record.

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II

The literary experience, which we have illustrated in these brief passages, is usually considered to have two aspects. There is first the content or subject matter; then there is the form or technique. It is assumed that Mr. Fenton had certain ideas about the nature of a soldier, which he chose to present in the form of a dialogue, the questions in free verse, the answers in rhyme and metre. Shaw, having certain ideas about St. Joan, decided to represent them in the scenes of a play. Literary studies have traditionally emphasized first content and then form, with frequent reminders that the two aspects coexist, and are separated merely for convenience. The novels of Thomas Hardy are about country people and may therefore profitably be compared with other novels about country people. Sonnets are all written in a fourteen-line pattern, and therefore sonnets may be profitably compared. Adopting these traditional categories for the time being, what can we say about them at the present time?

What do we mean by "literary content," or more exactly, "content suitable for literature"? There was a time of general agreement that literature dealt with certain subjects and not with others. Commenting on Dyer's poem "The Fleece," Dr. Samuel Johnson scoffed: "The subject, sir, cannot be made poetical. How can a man write poetically of serges and druggets?" In general it can be said that the 18th century looked for subjects of dignity and elevation. It is true that this was the century of *Robinson Crusoe* and *Tom Jones,* but it was also the century when these works were only slowly and reluctantly accepted as "literature." It took Burns and Wordsworth (and a great many others now forgotten) to demonstrate that common life was fit for literature. Under the changing banners of romanticism, realism, and naturalism the frontiers of literary content were enormously extended. We have only to enumerate a few of the

giants of the 19th century—Browning, Thackeray, Dickens, Trollope, Meredith, and Hardy in England; Hawthorne, Melville, Mark Twain, and Henry James in America; Flaubert, Zola, Turgenev, and Tolstoi on the continent of Europe. These are enough to suggest the huge accessions to the literary domain. The impact of the two wars in the 20th century has come close to abolishing any external barriers to the treatment of life in literature. Psychology and sociology may go anywhere. And so, it seems, may literature.

What is now excluded from literary treatment? Mathematics, we might suppose, since mathematics is a product of pure reason. But there is Miss Millay's fine sonnet, "Euclid alone hath looked on Beauty bare." (I do not know whether mathematicians are impressed by this poem, or whether they would agree that it is "about" mathematics.) Applied mathematics, such as results in a great bridge, say, is certainly a subject for literary treatment. And there is no reason that I can see why the mathematician himself might not be a fit subject. (Parenthetically I may remark that mathematicians are frequently philosophers and musicians; why shouldn't there be a mathematician-novelist or a mathematician-poet?) What about the subject of biology? I have become used to the intrusion of biology in romantic novels, but not long ago I was diverted by Robert Graves's little poem on "The Bluefly":

THE BLUEFLY[3]

Robert Graves

Five summer days, five summer nights
The ignorant, loutish, giddy bluefly
Hung without motion on the cling peach,
Humming occasionally, "O my love, my fair one!"
As in the Canticles.

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Magnified one thousand times, the insect
Looks farcically human; laugh if you will!
Bald head, stage-fairy wings, blear eyes,
A caved-in chest, hairy black mandibles,
Long spindly thighs.

The crime was detected on the sixth day.
What then could be said or done? By anyone?
It would have been vindictive, mean, and whatnot
To swat that fly for being a bluefly,
For debauch of a peach.

Is it fair, either, to bring a microscope
To bear on the case, even in search of truth?
Nature, doubtless, has some compelling cause
To glut the carriers of her epidemics—
Nor did the peach complain.

This poem would have surprised Dr. Johnson. The implication of such examples is sufficiently clear: human relationship to any phenomenon is potential literary content. The technicalities of radar are in themselves non-literary, but the difficulties of discovery, operation, and maintenance have a high literary potential. The recent novel *The High and The Mighty* by Ernest K. Gann gives some idea of what can be done with the extremely technical side of air-sea rescue. It is true, of course, that certain kinds of subject matter have an almost tyrannous dominance over the popular magazines, but there are other magazines. I doubt whether there was ever a literary situation in which there was more flexibility, more variety in the subject matter of which literature is being made. This is an immense superiority in comparison with the literary situation of, say, 1750.

III

Let us now turn to literary form as the term is commonly understood. The importance of literary form is, I believe, usually underestimated. When someone talks about "a book

that he can get his teeth into" or "getting at the meat" of what the author had to say, we can recognize the subject-matter reader. He reads Shaw to find out what Shaw thinks about women or socialism. He reads Eliot to confirm or confute high church Episcopal doctrine and ritual. He reads Faulkner to find out his views on the racial question. He reads Hemingway to find out how to fight bulls or confront death with becoming nonchalance. He reads Henry James—but probably he just doesn't read Henry James. Now the subject-matter reader may actually be affected by the form of the work he reads, but he doesn't like to be conscious of the form. When he is conscious of literary form, he is likely to suspect that he is being tricked. He is likely to throw the book aside and seek elsewhere for raw meat, uncooked and unseasoned. That such an attitude is short-sighted can be shown.

We can see the importance of form if we consider a few simple examples of the abuse of form. A bad argument may be formulated—note the word—so as to make the worse appear the better reason. A false climax may deliberately seek acceptance for a shoddy idea, as in "For God, for Country, and for Yale!" Another abuse of form is the "slick magazine" story; the dialogue seems real, the description knowing, and the situation plausible, and they almost persuade the reader to accept the contrived happy ending.

Now if the abuse of form can have these obviously bad effects, it is reasonable to suppose that form properly used is capable of good effects just as important. A simple example of the proper use of form is to underline content by repetition, by contrast, or by pulling together a cluster of associations. An engineer who had just seen the movie "Julius Caesar" told me that Antony's funeral oration was dull because it was too long, but the nearly universal opinion is that the length is properly proportioned to the crowd's reactions and to the spectator's or reader's appreciation of Antony's

incomparable skill as propagandist. Repeating the phrase "Brutus is an honorable man" so that it turns slowly from obsequious compliment to hissing sarcasm is a superlative use of form to heighten or intensify content.

From the concept of appropriate form it is only a step—though a long one—to the more radical concept of creative form. It has long been realized that a paraphrase or a summary is no substitute for a poem, a play, or a novel. The paraphrase is a convenient device for clarifying statements or drawing a map of an extended work. But a summary is not a poem, any more than a map is California. The subject-matter reader is always in danger of forgetting this, using his summary as a map so that he can move from one idea to another, but never really aware of the countryside about him at any given time. Not only the elementary student makes this mistake, but also, it must be admitted, the student of historical movements and cultural patterns. For a generation now we have been lectured by the new critics on such folly. With varying emphasis, such men as Richards, Brooks, Warren, Eliot, Ransom, Blackmur, and Wilson have been insisting that the individual work of art is the proper unit of concern for the critic. This means close study of form—form not as an artificial or arbitrary or whimsical addition to content, but form as a dynamic and creative means by which content is expressed, or more accurately, realized. This idea is inherent in the criticism of Coleridge, the great romantic critic of more than a hundred years ago. Consider his well-known statement that "nothing can permanently please which does not contain in itself the reason why it is so and not otherwise." This clearly refers to form, and conceives of form as a principle of expression, not an ornament but a necessity. This is much the same idea as is embodied in an anonymous critic's remark regarding James Joyce's *Ulysses:* "*Ulysses* is not about something; it *is* something." To expand this epigram, we may say that *Ulysses* is not a quart of

content poured into a convenient bottle. (Since *Ulysses* is an Irish work, the figure is perhaps unfortunate!) Neither the content nor the form of *Ulysses* ever had independent existence. One is even inconceivable without the other. In this sense it is true that *Ulysses* is not *about* something. It *is* something. It represents a new discovery about the human condition, just as the discovery of a new planet adds a new element to the known solar system. Those who have got beyond the surface chaos of this book claim for it almost a new dimension in the use of words to reveal the irrational realities of thought and feeling, as Stephen Dedalus and Leopold Bloom grope through the twenty-four hours presented in this seven-hundred-page book.

According to this creative concept of form, there is not in the universe a predetermined amount of meaning to be packaged and put into the human warehouse. The packaging is an infinitely varying method of dealing with an inexhaustible store of meaning. This is a view of enormous implication. It is, for instance, a refutation of the view of the naturalist, who under the categories of heredity and environment believes he can plot the curve of a life in which no value really appears. The symbolist gives up the cock-sureness of the naturalist, for after all, if meaning is inexhaustible and form an infinitely variable means for discovering it, a given work of art—even a great work of art—is only a seeming, only a hint. One recalls Meredith's lines: "Oh, what a dusty answer gets the soul / When hot for certainties in this our life." But if we give up a supposed certainty (a certainty which in human affairs has always turned out to be an illusion), we gain a flexibility as great as our individual capacities permit. In a world of rapid shifts and immense acquisitions of new knowledge, flexibility may well turn out to be the indispensable human quality. Only by unprecedented flexibilty can we create the permissive society which the variety of human capabilities seems to require.

From these large considerations, let us turn to a few illustrations of this concept that form is inseparable from content, is a dynamic tool in the discovery of content. Whitman's "When Lilacs Last in the Dooryard Bloomed," written in 1865 on the death of Lincoln, will serve us well. In the first place, Whitman is supposedly a "formless" poet. Lanier said of him, "He is poetry's butcher. He cuts you a slice off the rump and never mind the gristle." Yet even Whitman's detractors concede that this poem is effective. Further, it is so long that I must summarize the first part in order to quote the last, thus giving a clear contrast between the convenient map and the lovely countryside. Whitman, we know, was a great admirer of Lincoln, seeing him frequently in wartime Washington even though he never met him. During his service in the military hospitals Whitman became familiar with death. He saw hundreds of men die, watched them not casually, but sitting by their bedsides, trying to ease their last moments and listening to their last requests. So he knew something about the subject of death. He had the physician's view without the medical preoccupation. Yet when he heard suddenly, at home in New York, the news of Lincoln's death, he was unprepared. He tells (in *Specimen Days*) how he and his mother sat silent the whole day, shocked and stunned by the tragedy. A few months later he published the poem. We know little of the process by which the silent grief was turned into the poem, but the poem is a complete contrast to the mood of his first knowledge of the event. Thus, writing the poem was in fact a process of discovery.

The poem begins:

When lilacs last in the dooryard bloom'd,
And the great star early droop'd in the western sky in the night,
I mourn'd and yet shall mourn with ever-returning spring.

Ever-returning spring, trinity sure to me you bring,
Lilac blooming perennial and drooping star in the west,
And thought of him I love.

As the poem develops, the fallen western star seems to be identified with Lincoln. The beauty of the lilac is described, and the song of the hermit thrush associated with it. Amid these signs of spring and life passes the coffin on the long journey west for the burial at Springfield, Illinois. On the passing coffin the poet lays a sprig of lilac. The star, now thought of as the star itself, and the bird are represented as sharing the poet's grief. The bird's song is translated into words, beginning with these lines:

Come lovely and soothing death,
Undulate round the world, serenely arriving, arriving,
In the day, in the night, to all, to each,
Sooner or later delicate death.

Prais'd be the fathomless universe,
For life and joy, and for objects and knowledge curious,
And for love, sweet love—but praise! praise! praise!
For the sure-enwinding arms of cool-enfolding death.

The song of the bird arouses memories of the armies, the dead at rest, only the living still compelled to suffer.

This is a crude map of the first fifteen sections of the poem. Now let us read the final sixteenth section, with all the rich detail of the imagined countryside.

Passing the visions, passing the night,
Passing, unloosing the hold of my comrades' hands,
Passing the song of the hermit bird and the tallying song of my soul,
Victorious song, death's outlet song, yet varying ever-altering song,
As low and wailing, yet clear the notes, rising and falling, flooding the night,
Sadly sinking and fainting, as warning and warning, and yet again bursting with joy,

Covering the earth and filling the spread of the heaven,
As that powerful psalm in the night I heard from recesses,
Passing, I leave thee lilac with heart-shaped leaves,
I leave thee there in the door-yard, blooming, returning
with spring.

I cease from my song for thee,
From my gaze on thee in the west, fronting the west,
communing with thee,
O comrade lustrous with silver face in the night.

Yet each to keep and all, retrievements out of the night,
The song, the wondrous chant of the gray-brown bird,
And the tallying chant, the echo arous'd in my soul,
With the lustrous and drooping star with the countenance
full of woe,
With the holders holding my hand nearing the call of the
bird,
Comrades mine and I in the midst, and their memory ever to
keep, for the dead I loved so well,
For the sweetest, wisest soul of all my days and lands—and
this for his dear sake,
Lilac and star and bird twined with the chant of my soul,
There in the fragrant pines and the cedars dusk and dim.

In contrast to the simplicity of the opening lines quoted above, this final passage is elaborate and elusive. The statements are suffused in harmonious iteration and parallel. Yet this is appropriate, since the statements made can only be grasped when the pitch of feeling is high. The mourning of the opening lines has been replaced by "memory ever to keep." The fact of death is not so much explained as realized, like the familiar phenomena of nature: "Lilac and star and bird twined with the chant of my soul." The formulation is essential to the discovery. Strip away the formulation by paraphrase and dull platitude remains.

IV

If we accept the description of the literary experience made thus far, it is apparent that literature is not merely a genteel

pastime for idle hours, but a method by which the raw content of life is formulated for intelligent appreciation and contemplation. In short, it is philosophical in nature. But this is not the same as saying that literature *is* philosophy. Let us examine the difference. A writer, we say, chooses a subject. When he does, he must use some principle of choice. Some writers, of course, insist that the subject chooses them, that they are "inspired," as used to be said, or that they depend on the subconscious, to use the current vocabulary. There is some truth in this. Nevertheless, however the choice originates, it must be approved. There is no law compelling a man to write—or publish—a poem, play, or novel. The literary act, then, is not conceivable except on some principle of choice, some recognition, stated or implied, of value. When Wordsworth writes a poem about daffodils he is saying that there is a point of view from which daffodils are important enough for the time being to crowd out of our minds all thought of international affairs. (Let us remind ourselves that the daffodil poem was written in 1804, in the midst of the Napoleonic wars.) But value in literature, however intense it may be, is usually fragmentary and unsystematic. Milton writes "L'Allegro," a lively, happy poem, and also "Il Penseroso," a somber, contemplative poem. The two poems remain wonderful expressions of these moods, with no attempt to generalize about which mood applies, or should apply, to the greatest number of persons. Literary men characteristically hesitate to commit themselves to a systematic philosophical view. They fear that adoption of a system will impose rigidity upon their observation. Major figures, it is true, usually show a tendency to emphasize some particular aspect of experience. With Milton we associate an austere virtue; with Keats, sensuous beauty; with Shaw a comic sense of the paradoxical nature of good and evil; with T. S. Eliot, an awareness of the disturbing relationship between the complex present and the diverse, still-influential

past; with Faulkner, an almost intolerable sense of the compulsive force of human drives. Such values, however, are strongly emotional. We associate them with particular experiences rather than with a universal system. The value inherent in literature is thus a contribution to philosophy rather than a philosophy in itself. It is likely that a philosophy that does not draw fully on the literary experience is going to be deficient in vitality, in a word, unreal. Conversely, the literary experience, no matter how rich, needs to be supplemented by the discipline and illumination of systematic philosophy.

In somewhat more definite terms I should like to show the contribution of literature to philosophy by sketching specific achievements of three 20th-century American writers: T. S. Eliot, Ernest Hemingway, and William Faulkner. For each of these I will use a single work. Eliot's *Waste Land,* first published in 1922, presents the desert of western culture just after World War I, empty, disillusioned, motiveless. The way out of the wasteland is the way of ancient wisdom, represented by the Sanscrit words repeated at the end of the poem: Da, Dayadhvam, Damyata—give, sympathize, control. So stated, the poem seems a platitude, but by representing typical frustrations, boredoms, and aridities of contemporary life, Eliot forces the reader to realize that it is a wasteland. By properly setting the Sanscrit words he makes them lose their triteness, and become charged with insight and vision. Thus for over thirty years the *Waste Land* has been, for those who could read it, a created symbol, a useable formulation of the problem of meaning in modern life. Now suppose that T. S. Eliot had died before 1920, and never written the poem. We should, I think, be spiritually poorer than we are. Not because we should lose the meaning—the content—of the poem, for we should still have that through other works. Our poverty would consist of being deprived of a richly imagined and wonderfully phrased formulation which en-

larges the very world to which the meaning applies. The formulation contributes to an understanding—a philosophical understanding—of the modern era.

For Ernest Hemingway I shall take the novel about the Spanish Civil War—*For Whom the Bell Tolls.* Published in 1940, this novel illustrates the idea stated in the sentence by John Donne from which the title is taken: "No man is an *Iland,* intire of it selfe; every man is a peece of the *Continent,* a part of the *maine:* if a *Clod* bee washed away by the *Sea, Europe* is the lesse, as well as if a *Promontorie* were, as well as if a *Mannor* of thy *friends* or of *thine owne* were; any mans *death* diminishes *me,* because I am involved in *Mankinde:* And therefore never send to know for whom the *bell* tolls; It tolls for *thee.*" In this novel Robert Jordan, the American teacher, joins the rebel cause in Spain partly out of theoretical conviction, and partly out of an irresponsible spirit of adventure. Through the guerrilla action in the hills which costs him his life, Jordan becomes involved in mankind (and womankind) in such a way that he dies content. As he waits for certain death from the pursuing loyalist cavalry he tells himself; "The world is a fine place and worth fighting for and I hate very much to leave it. And you had a lot of luck, he told himself, to have had such a good life." Again, the idea reduced to its essence is a platitude. It is none the less true, however, and in the novel the realization is so sharp that all suggestion of platitude drops away, as it always does when the imagination functions effectively. Had *For Whom the Bell Tolls* never been written, the platitude would remain with us, dignified by the events that followed 1940, but lacking an important inner illumination provided by Hemingway's novel. This illumination is as essential for philosophy as it is for literary effect.

William Faulkner is another writer of exceptional power and vision. Using the Mississippi locale familar to him from

birth, he has created a region which he calls Yoknapatawpha County, and for which he has whimsically drawn a map, indicating the scenes of his novels and the homes of his characters. His specialty is thus the southerner, white and black, quality folks and poor whites. Southern-born readers verify that the dialogue is authentic, the description soundly based. They often deny, however, that there is as much ignorance, lust, perversion, and violence to the square inch in the actual south as is found in Faulkner's pages. We may perhaps concede that some element of exaggeration is inherent in the literary method. Selection is inevitable, and selection organized by design will intensify. But such a statement leaves out of account the selector, the writer, who is himself an important aspect of total reality. If a writer is a particularly sensitive person, as he usually is, then his response to cruelty, say, will be more intense than that of the ordinary person. It is hard to see by what logic a callous man's insensitivity can be called more "true" than a sensitive man's torment. Both are "true." In this perspective, I think, we must read a novel like *Light in August* (1932). The central story in this work is of a supposed mulatto, ironically named Joe Christmas, a loveless and ruthless man who eventually murders the white mistress who first befriended him and then tried to dominate his life. Now the callous man's condemnation of Joe Christmas is instant, and in the novel it leads to the castration and shooting of Joe Christmas. But Faulkner, without minimizing the brutality of the murderer, without in any way sentimentalizing him, reveals him as still human, a man understandable in terms of his heredity and environment. This revelation of humanity is not a matter of statement. It is a matter of experience, ingeniously arranged in the novel, so that the platitudinous ring of "man's inhumanity to man" gives way to a crescendo of conviction. The experience, however, is not raw experience, but formulated experience. The

writer's vision contributes something of importance to the philosopher: an inner comprehension, a philosophic grasp, of an aspect of life.

Thus form becomes substance, means becomes end. These seeming opposites are dynamically fused in the literary process. Properly speaking, a literary work does not "illustrate" an idea; it discovers, or rediscovers it. The discovery is philosophical in nature, since the literary act creates or intensifies meaning. Is the meaning inherent in raw experience itself or inherent in the artist-observer? It is perhaps impossible to answer this question, and in the present discussion it is unnecessary. The literary work is obviously part of man's total experience, and hence is material which the philosopher must take into account. The formulated quality of the literary work, however, gives it special importance. Synthesis is a major task of philosophy, and the literary work does within chosen limits what philosophy must do on a larger and more theoretical basis. This must be realized by both philosophers and students of literature. Literature itself must be conceived of as an endless process of discovery and rediscovery. If we think of it thus, we shall make the study of literature vigorous and vital. One evidence of health will be an alternating current between literature and philosophy.

WHAT'S IN A CLASSIC? THE UNITY OF AUGUSTINE'S *CONFESSIONS*

Petr B. Fischer

THE LIGHT, or the shadow, of Augustine lies over such a vast area of Christian thought and piety from his day to the present that the many new critical texts and editions of his works, and the new translations, Protestant and Catholic, do not surprise us. Augustinian scholarship continues to be lively business. The three heavy volumes of the recent International Augustinian Congress, with addresses from the four corners of the world (but with a surprisingly small representation from the United States), testify to an amazing variety of interests among scholars, from Augustine's literary images to his influence upon Reinhold Niebuhr.[1]

Augustine's life, along with his social-cultural milieu, also has come in for some re-thinking and re-writing in our day. In spite of occasional special pleading that the saint's gloriole confers upon him immunity from the scalpel, modern scholars of all faiths have joined in pretty thorough anatomy of his historical remains.[2]

This article is concerned with Augustine's *Confessions,* a work far from the weightiest that came from his pen, but one which has been acclaimed and very nearly appropriated by the general public. In fact, if the availability of this book on the market is any indication, the demand for it has been

[1] *Augustinus Magister: Congrès International Augustinien, Paris, 21-24 Septembre, 1954* (3 vols., Paris: Études Augustiniennes, 1954).

[2] Revised, too, is the picture of Monica, his prayerful mother, whose all-controlling influence over her grownup son is now freely recognized. The latest of young Augustine's biographies to appear in English, and by far the best informed, J. J. O'Meara's *The Young Augustine* (London: Longmans, Green, 1954), calls her "mulier fortis."

steadily growing. Out of the nine separate translations of the *Confessions* into English, six have come forth since the turn of the century.

I

The reader who, for one of the inscrutable reasons that make people reach for the classic, merely scans the *Confessions* is most likely to pass quick judgment on the book as "ascetic" and "puritanical"; at best it will be a case study for the files of a psychologist.

The reader who slows down to the pace at which the quality of writing begins to make itself felt, will be overwhelmed by the rampaging torrent of words and phrases. Their purpose may remain obscure until he is informed that such are the conventions and the devices of the ancient and honorable art of rhetoric, of which Augustine was a master and by which once he earned his living. Consider for instance one of the early paragraphs of the work:

> What art Thou then, my God? what, but the Lord God? For who is Lord but the Lord? or who is God save our God? Most highest, most good, most potent, most omnipotent; most merciful, yet most just; most hidden, yet most present; most beautiful, yet most strong; stable, yet incomprehensible; unchangeable, yet all-changing; never new, never old; all-renewing, and bringing age upon the proud, and they know it not; ever working, ever at rest; still gathering, yet nothing lacking; supporting, filling, and overspreading; creating, nourishing, and maturing; seeking, yet having all things. Thou lovest, without passion; art jealous, without anxiety; repentest, yet grievest not; art angry, yet serene; . . . And what had I now said, my God, my life, my holy joy? or what saith any man when he speaks of Thee?[3]

This is but a fragment of a single paragraph. In it, Augustine struggles with the limitation of language to express the real-

[3] *Confessions of Saint Augustine,* Book I, Chapter iv. Unless otherwise indicated, quotations are from the translation by Edward B. Pusey, London, 1838.

ity of God. First he employs superlatives; then a series of opposites, even paradoxes, which might perhaps convey something of the unspeakable wonder which the superlatives were unable to say: "most hidden, yet most present; never new, never old; ever working, ever at rest," *etc.* Then he brings in a series of contrasts between human and divine qualities of the same order: love without passion; jealousy without anxiety, *etc.* In the end, having used some of the expert devices of language, he professes that he has really said nothing at all about God—a statement of no mean rhetorical value.

A still more attentive reader will become acquainted with the man Augustine, a powerful personality and a powerful thinker; but he will wonder in perplexity about the purpose of the book. Is it primarily a narrative of Augustine's conversion, intended to give others an example of what God can do for man? Or is it a devotional book, full of prayers to God? Or does the burden of the book lie perhaps in the lengthy philosophical reflections on a variety of apparently unrelated subjects, such as human memory, or the nature of time or of creation? This reader will be right on all three counts. For the work before us indeed contains fragments of narrative of the author's youth and manhood; these are interspersed by lengthy passages of theological and philosophical reasoning; and both the story and the trains of thought are repeatedly interrupted by bursts of adoration.

It is possible to bend still more closely over the *Confessions,* as if with a magnifying glass; one then finds more and more unexpected value, but also an increasing number of problems. The careful devout reader is satisfied with the values; the scholar thrives on the problems.

Ever since the 19th century, when literary and historical critics like a swarm of ants took apart the whole literature of the Bible, tearing loose whatever would give and prying whatever would not, Augustine's *Confessions,* too, have come in for close scrutiny. Every fact has been fitted into the cir-

cumstantial evidence available. Many a phrase has been compared with its usage in the writings of antiquity and in other works of Augustine. Cultural historians have studied the *Confessions* in the context of ancient education and rhetoric; theologians have analyzed them for traces of doctrinal influences such as those of the Manichees, the Neo-Platonists, or Bishop Ambrose.

Many of the problems opened in the 19th century are still with us in the 20th. For instance: was Augustine converted to Christianity or to Neo-Platonism? There is much evidence to support both views, or the reader may prefer another variation: Neo-Platonism with an ingredient of Christianity, or Christianity with an ingredient of Neo-Platonism. It has also been suggested that it is a false problem, since the opposition between Hellenic and Judaeo-Christian thought is a modern dichotomy which did not exist in the 4th century A.D. This last view seems at present the most reasonable one.

Another instance of the recurring problems is this: how faithfully did Augustine report of himself? Everyone agrees that his selection of autobiographical data is one-sided. Shall we assume that he distorted because of the failure of memory and the lapse of time between the events and the writing, or did he select intentionally, in order to achieve a desired effect? At the present stage of the debate, scholars are apt to answer "both," with a strong suspicion that intentional selection was the stronger force.

II

I wish to discuss still another basic problem that to my knowledge has been investigated without satisfactory results: the unity of the *Confessions*. Put simply the question is: was the book intended to be one, two, or three separate writings? If by Augustine's own testimony it is one work, wherein lies its unity?

As one might expect, most people have read the *Confessions* for the story. It is interesting to read the account of Augustine's youthful passions, his struggles against himself, and his dramatic conversion. It is emotionally satisfying to see him come to peace—at long last—with his mother, and to see her happily passing away in his arms.[4] But the story of conversion ends in Book VIII, and Monica dies in Book IX. What shall we do with the four weighty books (X-XIII) which fill nearly half the volume of the *Confessions* and which have nothing to do with Augustine's youth or his conversion? Full of philosophical, psychological, and religious themes, these books seem to be quite independent.

Recently, Professor Courcelle of the Sorbonne, a leader in the literary research of Augustine, has made a surprising suggestion: the *Confessions,* he claims, were originally intended as a first part of a much larger work, a complete exposition of Christian doctrine, beginning with the book of Genesis. According to this viewpoint, which gathers many references in its support, the story of Augustine's youth and conversion was intended as mere introduction, and is of secondary importance.[5] The reader, looking at the work as it stands, may of course find himself at a loss, because only the last three of the thirteen books profess to be an exposition of Genesis.

Clearly, whether the primary theme of the book is the story of conversion or the exposition of doctrine, about half the book is about something else than its major theme, and the book must be a miscarriage of its original purpose. This is hard to believe about a writing from the pen of a great thinker.

[4] O'Meara (p. 11) takes the viewpoint that "the central point of the *Confessions* is the conversion."

[5] Pierre Courcelle, *Recherches sur Les Confessions de Saint Augustin* (Paris: De Boccard, 1950), p. 23. For the reader who desires a documentation of the theories about the *Confessions* over the past half century of research, Courcelle provides here a fine survey. In the next few paragraphs, I have not documented in detail the theories of Williger, Wundt, and others, since they are easily available in the survey mentioned, or in O'Meara, *op. cit.,* pp. 14ff.

In addition to the division of the *Confessions* into these two apparently incoherent portions, there is one more major stumbling block, Book X. One is almost tempted to assume that Augustine anticipated that sometime, somewhere, academic heads would be bending over his writing, and that he, who once had belonged among their kind, could not deny himself the pleasure of confounding them. Why else should he write Book X, which deals neither with his conversion nor with Genesis? Instead, this book refers briefly to Augustine's life after a twelve-year gap of time following his conversion, and develops in considerable detail the subject of the strange and magnificent power of human memory. No wonder that Williger's recent theory that Book X was only later inserted by Augustine has aroused lively interest. What is more comfortable than to get rid of something one cannot explain by ripping out the pages! Such radical surgery, however, leaves unexplained the reason why Augustine chose to add this magnificent book to the *Confessions* (and in the middle of the work at that) rather than write a separate treatise on the subject.

There are other specific signs of lack of unity. The title of the work, for instance, is of little help; the word "confession" is used in the several parts in different meanings. In Books I—IX it is Augustine's confession of sin and of the grace of God operating in his life; in the last books, the word is merely used as "admission of ignorance and confession of faith".[6] It has also been noted that the concluding prayer has nothing to do with the theme of confessing.

What conclusions may be drawn from all this? Professor O'Meara expresses doubt that the work has any real unity and flatly calls it "a badly composed book." Others, without giving up hope, have suggested various, though sometimes artificial, unifying principles. The book has been called "a sacrifice of praise" (which is true, but does not do away with

[6] Courcelle, pp. 18f.

the problem); or the theme of God's helping man in trouble has been suggested (if so, why the exposition of Genesis?). Outward circumstances have been invoked: one party is said to have asked Augustine for an account of his conversion, another one for the exposition of Genesis, and a third party for the account of his life at the time of the writing, and Augustine killed the three birds with one stone. (I confess I do not see why in such instance the great master of rhetoric would not have written three separate accounts of the three different subjects and sent them separately to the parties concerned.) More ingenious is the suggestion of M. Wundt that in the *Confessions* we have an example of Augustine's concept of catechesis. The catechumen is asked which experiences led him to religion. After he has acknowledged the manifold ways by which God had worked in his life, he is instructed in the understanding of the Bible, beginning with Genesis. The merit of this viewpoint has been widely recognized, and the explanation fits Augustine's concept of catechetical instruction as it is known from his other works.

The contents of Book X still do not fit very well into this explanation. But even disregarding this book, Wundt's theory squares with the plan of the *Confessions* perfectly only as long as one thinks of the *Confessions* as of a scholarly problem to be solved. When one reads the book afresh, with its hymns of praise, with its psalms in which Augustine "opens his bowels" to God, when one sees him writhing in ecstatic adoration of the blazing sun of mercy, it seems rather offensive to imagine that Augustine would have contrived all this as a mere lesson or the illustration of a theory.

I find myself in sympathy with the position of Professor Marrou, who looks upon Augustine's style as a supreme mastery of the art of a rhetoric so refined that it uses even intentional distortion for the attainment of subtle effects. Marrou had once depreciated Augustine as a phenomenon of the age

of decadence; at that time he wrote that "Augustine composed badly."[7] Later, in the second volume of the same work, which he called *Retractatio* (after Augustine's famous work of the same title) he made a spectacular about face and wrote: "To reproach the Rhetor Augustine that he doesn't know how to compose is to assume that Braque or Picasso were not capable of drawing a guitar according to the laws of perspective."[8] I believe that the *Confessions* is best interpreted as a work of art, although the freedom with which Augustine engages in the luxury of a long excursus whenever his mind so pleases, makes his work less tightly planned and more spontaneous than that of the artists mentioned.

To sum up the brief survey of the problem before us: scholarly judgments about the *Confessions,* in contrast to the simple acceptance of the devout, fall apart at every turn. In the matter of Augustine's style and composition, judgments range from "badly composed" to "perfect mastery." On the matter of unity, the disagreement is even more varied: some writers deny that the book as it stands has any unity whatever. Others insist that there is unity, but they disagree as to where to find it. Some say it is in the realm of religious inspiration, others seek it in the province of Christian doctrine, and still others in the field of Christian instruction.

III

I do not pretend to have cut through the Gordian knot of the numerous special problems that beset the study of this book. But concerning the unity of the *Confessions,* a book I have taught in my classes, I feel strongly that there is a solution. Moreover, I believe that the simplest solution rings most true and yields the best results. Here briefly is my point of view.

I think with Courcelle that Augustine's purpose through-

[7] Henri-Irenée Marrou, *Saint Augustin et la Fin de la Culture Antique* (2 vols., Paris: De Boccard, 1938-49), p. 61.
[8] *Ibid.,* p. 665 (translation mine).

out the book is theological.[9] I am not convinced by O'Meara's most excellent and useful book that Augustine's purpose was to write the story of a typical conversion—"the story of Everyman"—and that the book is essentially "an illustration of his theory of man."[10] Such interpretation considers merely the first part of the work. My method is reverse: I begin by considering the last part first, and then read the whole work with the key offered therein. In this way, I arrive at the conclusion that the *Confessions* is not a book about man, but a book about God, and in particular God the creator.

Some of the closed doors now begin to open, and the unity begins to appear. The first book turns out to be nothing but praise of God *because he is the creator.* Let us remind ourselves of some of the familiar passages: "Thee would man praise; man, but a particle of Thy creation . . . Thou madest us for Thyself, and our heart is restless, until it repose in Thee." (I. i) "Heaven and earth which Thou hast made, and wherein Thou has made me." (I, ii) These quotations are typical of the devotional passages. The story of Book I, too, is the story of the creation of little Augustine, beginning in his mother's womb, becoming a suckling at his mother's breast, and growing and learning as a child. "Thou, O Lord, my God, who gavest life to this my infancy, furnishing thus with senses the frame Thou gavest, compacting its limbs, ornamenting its proportions . . . implanting in it all vital functions." (I, vii, 12) The closing paragraph of Book I logically carries through the same theme: "Good, then, is He that made me . . . for even to *be* Thou hast given me." (I, xix, 31)

It is my contention that Augustine read the meaning of the words "God created heaven and earth" through the meaning of his own profession: "God created me." This,

[9] "Even in the first nine books it is evident . . . that the principal purpose of Augustine is not historical but theological."—Courcelle, p. 27 (translation mine).

[10] O'Meara, pp. 13 and 18.

then, is the uniform sense of the word "confession" throughout the book. Whether it refers to sins, or the praise of God, or to faith in God, it has the same underlying reference to "I believe in God almighty, creator of heaven and earth, creator of me."

The concluding prayer of the last book, in style and content, is a perfect counterpart of the opening paragraphs of the first book. There is the same poetry, the same meditative devotion, and the same theme of creation present and continuing: "Let Thy works praise Thee, that we may love Thee; and let us love Thee, that Thy works may praise Thee . . . for they were made of nothing, by Thee." (XIII, xxxiii, 48) Then, in an obvious reference to the Biblical story of creation and at the same time to his own life: "For our sins hung over us, and we had sunk from thee into the darksome Deep, and thy good Spirit hovered over us." (XIII, xxxiv, 49)[11] Finally, in the last paragraphs, Augustine looks toward the accomplishment of the process of creation: "O Lord God, give peace unto us: the peace of rest, the peace of the Sabbath, which hath no evening . . . For then shalt Thou so rest in us, as now Thou workest in us." (XIII, xxxv, 50, and xxxvii, 52) As in the first chapter, seemingly concerned with himself, Augustine praises the creator of heaven and earth, so in the last chapters, professedly an exposition of the creation of the world, Augustine repeatedly draws attention to the continuous work of God within himself. The creation of the world, and the creation of the man who is here professing, form one and the same theme, and the book which at first sight had no unity now has both a beginning and an end.

But we still have to deal with what comes between the beginning and the end. From the second book until the ninth lies the most popular part of the work. Augustine's awaken-

[11] The translation of this passage is by William Watts (1631) as given in the Loeb Classical Library edition, II, 469.

ing manhood is here recounted, and the sins of his adolescence; a sketch of his uphill road, from Cicero to the Manichees, to the Neo-Platonists, to St. Ambrose; his friends, his conversion, his baptism, and Monica's death. Scholars are wont to distinguish between his intellectual conversion and the conversion of his will—the first a gradual process which is probably not finished at the time of his baptism; the second a sudden change which completes the resolve to leave the old life behind and to begin a new life. All this, by ordinary theological usage, may hardly be called a story of creation. It might rather fall under the topic "salvation." Indeed, the conversion and baptism seem to fulfill the theme announced in the beginning: "Our heart is restless until it finds rest in Thee." Has Augustine not found peace with God and with his mother? Why should he write another four long books before concluding with the prayer: "O Lord God, give peace unto us"? We cannot be surprised that many would be satisfied to have the work end with Book IX.

But Augustine does not look upon the theme of conversion here as essentially different from the theme of creation. Perhaps he left us a clue when a year before his death he wrote to Count Darius in explanation of the *Confessions:* "I was headed to perdition; but God who had formed me, re-formed me."[12] "Qui fecit, refecit"—formed and re-formed; made and made over; created and created anew; any of these translations would do. The important thing is that Augustine looked upon his conversion as the continuation of God's creative work on himself. In his mind, the story of conversion falls well within the limits of the general intention of the book.

Augustine's theology is generally known to be theocentric. Not the subjective value of human salvation, but God and his grace is the perennial subject of his wonder. It is proper

[12] *Epistola ad Darium,* CCXXXI, 6; I am indebted to Courcelle, p. 235, note 2, for this reference. Characteristically, this statement is preceded by a quotation from Psalm XCIX: "Ipse fecit nos, et non ipsi nos."

that also in the *Confessions* the beautifully dramatic and sentimental aspects of his own conversion and the death of his mother should recede into the background before the more objective grand theme of God's creation.

With regard to the remaining books and their varied themes, it is not difficult to find their bearing upon the topic "creation." As Professor Christian of Yale has written, "Time and eternity, nature and human history, body and soul, good and evil—all these themes are developed and interconnected in Augustine's thought about the creation of the world . . . In his treatment of the subject the main strands of his cosmology are knotted together."[18]

In Book X of the *Confessions,* without becoming tangled in the strands of Augustine's cosmology, we may read something of a poetry of creation: "I asked the moving air; and the whole air with his inhabitants answered, 'Anaximenes was deceived, I am not God.' I asked the heavens, sun, moon, stars . . . and they cried out with a loud voice, 'He made us.' . . . I asked the whole frame of the world about my God; and it answered me, 'I am not He, but He made me.' " (X, vi, 9) Thus even the most controversial of the thirteen books clearly rings with the praise of God the creator.

In this book Augustine also pursues the question: how do I know myself, and how do I know God? It is well known how in the process of answering this question he analyzes the complexity and depth of human memory, its associations, forgetfulness, *etc.* But as he probes memory, he again comes back to God: "Great is this force of memory, excessive great, O my God; a large and boundless chamber! Who ever sounded the bottom thereof? Yet is this a power of mine and belongs unto my nature; nor do I myself comprehend all that I am . . . Although no man knoweth the things of a man, but the spirit of a man which is in him, yet is there some-

[18] William A. Christian, "The Creation of the World," in *A Companion to the Study of St. Augustine,* Roy W. Battenhouse, ed. (Oxford University Press, 1955), p. 315.

thing of man, which neither the spirit of man that is in him itself knoweth. But Thou, Lord, knowest all of him, Who hast made him . . . I beseech thee now, O my God, discover to me myself also." (X, viii, 15; v, 7; and xxxvii, 62) Who should know man—that particle of God's creation—better than the creator? To know oneself is to accept oneself as seen by God.

Again in Book XI, the celebrated dissertation on time is nothing more than a philosophical statement of the difference between the creation and its creator. The substance of the argument depends on the premise that even time, within which everything moves and has its being, is a creation of God: "For whence could innumerable ages pass by, which Thou madest not, Thou the Author and Creator of all ages? or what times should there be, which were not made by Thee . . . Thou art the Creator of all times." (XI, xiii, 15) Time is subject to God, but God is not subject to time. Eternity is not an extension of time but a separate quality of existence, outside of the realm of creation (although the eternal is capable of manifesting its presence in the temporal realm).

Like Book XI, the last two books professedly are exposition of Genesis I, therefore of creation. Augustine's comments here are intricate and difficult, but the focus is beyond doubt: "Now are all things fair that Thou hast made; but behold, Thyself art unutterably fairer, that madest all." (XIII, xx, 28)

Thus we arrive at the general evaluation of the problem: is there unity to the *Confessions,* or is the work composed of separate and incompatible parts? I do not claim that the *Confessions* lack variety of subject matter. I do assert that all the varied topics, from the first to the last, find in the concept of God the creator a unifying "golden thread," a common reference, and a common ground.

Only upon the recognition of this objective theme is it

permissible to say also that the book is a book about Augustine. The meeting ground between the objective and the subjective interpretations of the work is found in the very Book X which some current scholarly opinion would like to excise: man knows himself only in so far as he learns to know God; and he learns to know God only in so far as he learns to know the truth about himself. With this book as a pivot, a balance is attained between the early and the late books of the *Confessions.*

To sum up with a bow to current fashion, I would say that the *Confessions* is an existential book in the real sense of the word, because in the last analysis Augustine here probes the meaning of his own existence by calling and praising him whose creative act had brought him into being.

LATIN AMERICA AND THE PERIPHERAL THEORY OF ECONOMIC DEVELOPMENT

Pedro C. M. Teichert

I. Latin America's Institutional Heritage

EVER SINCE the end of the 19th century, Latin America has been undergoing a fundamental revolution in economic policy that has in some republics already completely transformed the traditional ways of making a living. Through a grass-root transformation, social as well as economic, most of the twenty Latin American republics have tried to establish independent and responsible nations with a citizenry equal to that of other countries and with their own national cultures, free from domination by foreign ideas and alien ways of life.

In this process industrialism is only part of the effort. Only if the fundamental Latin American drive toward the creation of independent, self-respecting nations is kept in mind will it be possible to understand fully the function which "industrialization" plays in Latin America's present developmental process—it is only a by-product in the struggle for human and national self-assertion. To analyze the expropriation of Mexican oilfields and the destruction of the plantation system, for example, in terms of a profit and loss equation is to forget completely that in this instance it was not the main and immediate purpose to increase yields from wells and land, but to enhance the dignity of those who were working the nation's resources and tilling her soil.[1]

[1] Frank Tannenbaum, "Reflections on the Mexican Revolution," *Journal of International Affairs,* IX (1955), 38-41.

For a meaningful analysis of Latin American developmental processes an intimate knowledge of cultural and historical development is almost indispensable. Latin American development can be assessed only in the light of its institutional past. Although the 19th-century attempt to impose European culture and laissez faire economics on an Indian-Colonial culture resulted in dismal failure, nevertheless some Latin American scholars have disregarded this lesson and continue to analyze Latin American developmental measures with their customary tools, the profit and loss equation and the more subtle device of measuring success by way of comparative cost analysis. They do not seem to realize that the agrarian movement, the labor movement, the opposition to foreign influence in industry, finance, and commerce, are all part of the peoples' reaction and rebellion in pursuit of human dignity and opportunity for economic advance, which were denied them by the former coalition of the native landed aristocracy and foreign finance capital.

Pre-revolutionary Latin America was, as Professor Charles Cumberland rightly states, "a plutocracy based on the exploitation of the vast majority and supported by a philosophy of government which had little relationship to the reality of Latin America's heritage and culture."[2] The economic and social policy revolution in Latin America tried to accomplish the following goals: (1) to establish political democracy; (2) to improve the standards of living, health, and education; and (3) to bring about a proper balance between the function of ecclesiastical and political government. The Latin American republics tried to get control of their own political and economic destiny and to create new nations which would include the best of the indigenous and European values.

To accomplish such a bold task is not easy, and to accomplish it all at once is almost impossible. Only a bold new program could try to undertake what was desired, and radi-

[2] Charles C. Cumberland, "The Mexican Revolution," *The New Leader*, December 27, 1954, pp. 12-13.

calism has many times arisen in the attempt to accomplish too much too fast. Since neither the economy nor the political balance could withstand the impact of all the miscellaneous measures introduced, social and economic experimentation has frequently been resorted to during the past three decades or so.[3] Opportunistic measures in this respect have also led to contradiction and conflict in economic policy. The expropriation of foreign capital in Latin America has, for example, been interpreted to mean that Latin America does not recognize the beneficial effects of foreign capital in its developmental effort. This is of course not correct, since today capital is freely admitted to all republics that have succeeded in establishing their political and economic independence.[4]

Finally it should be kept in mind by all critics of Latin American development, that many of its specific policies in the recent past have been means and not ends. In a sense the agrarian programs, labor legislation, foreign capital expropriation, anticlericalism, and finally the government-inspired industrialization drive, have only been incidental to the basic social and economic policy revolution. Just as it was the objective of the Latin American agrarian reform to create "a sturdy agricultural group, economically independent and socially important, from which would stem democratic values, a desire for education, and all the other values of a vital and progressive society,"[5] so it is the object of today's industrial revolution to accomplish similar results by other means.

Industrialization has been such a means to liberalize Latin American productive energies, to raise immediately and visibly the standards of living for the heterogeneous Latin American society. The "industrial revolution" in Latin America is, therefore, not completely comparable with the

[3] *Ibid.*, pp. 13-14.

[4] Economic independence should not be confused with economic self-sufficiency.

[5] Charles C. Cumberland, *op. cit.*, p. 15.

classical Industrial Revolution in England and the other older industrialized countries. It is rather an integral part—and at present the most important part—of a great and all-embracing plan of national face lifting. The suggestion has been made that the only resemblance of Latin America's industrial revolution to the former is found in the effects it has upon the life of the country, principally observable in the shift of population to the centers, and the multiplication of the problems of urbanization.[6]

Two more points are indispensable to the understanding of the more technical analysis of the principal development theory which I am going to discuss. (1) The national governments in Latin America, as the national governments in many other newly industrialized countries, where income levels were too low to support sufficient capital formation, had to start the economic development process to break the vicious circle of poverty that had imprisoned the economy. Social overhead expenditures by the governments were necessary to establish a suitable climate for private enterprise to work in. This resulted in agrarian reform, the establishment of national credit institutions and development banks, technological education, and public works in all fields, particularly in irrigation, transportation, and power. Also health and general welfare programs were devised to unleash national productive forces and to encourage foreign investments if so desired. In short, government planning became an integral part of the new Latin America.[7]

(2) The second point is concerned with Latin America's system of values. Too often, economists of advanced nations analyze Latin American policy measures and developmental theories by bringing with them an accepted set of values as to

[6] Lesky Bird Simpson, "Unplanned Effects of Mexico's Planned Economy," *Virginia Quarterly Review*, XXIX (1953), 514-515.

[7] This sort of planning need not be confused with government ownership of productive resources. Only railway transportation, telegraphs, the petroleum industry, and a few other public utilities are government owned in most Latin American countries.

what the purpose and final goal and achievement of any particular policy measure or theory should be. They also make certain assumptions which in Latin America are non-existent. Repeatedly the advice is heard for Latin America to follow sound monetary and tax policies, whereas in many republics money markets and a banking system as conceived in advanced countries are absent, and taxes are difficult to levy and collect because large sectors of the population do not participate in the money economy. Moreover, statistical techniques for the sufficient collection of economic data have not yet been developed. But besides these difficulties, the misunderstanding of which leads to bad advice and lack of fundamental understanding of the Latin American scene, it has to be kept in mind that Latin Americans have quite a different philosophy of life than Anglo-Saxons. For instance, maximization of profits in monetary terms is not always the primary goal. It is rather maximization of life enjoyment that Latin Americans are after, including the satisfaction of their spiritual wants.[8] The application of marginal and comparative cost analysis as developed by classical economics is, therefore, not always in place. The concept of marginal social productivity—a concept going beyond monetary measurement is a much more valuable measure of maximation of effort in Latin America.

With these concepts and reservations in mind, we may now attempt a synthesis of Latin America's principal development theory.

II. The Origin of the Peripheral Theory

The theory of the peripheral economy was developed by Professor Raul Prebisch with particular reference to Latin America. The theory deals with a region that has not kept up with present economic progress achieved in Europe and

[8] Samuel Arny Inman, *Latin America, Its Place in World Life* (New York, 1942), pp. 21-25.

the U. S. The initial developmental advantage of the latter, because of an earlier start, has never been made up by Latin America; worse than that, the gap has been increasing constantly.

In the framework of international division of labor, Latin America developed in close connection with Britain and the U. S. The first developmental impulse was generated in Latin America as a result of the disruptive forces of World War I. Some manufacturing was established behind tariff walls. During the roaring twenties the dangers of international interdependence were soon forgotten. It took the second disruption of world trade during the depression of the 1930's to bring forth a genuine economic policy revolution in Latin America, and to cause the abandonment of traditional economic policies. World War II only accentuated and definitely established the new economic policies in almost all of Latin America.[9]

Because of its economic and cultural dependence on Europe and the U. S., Latin America had not developed its own economic doctrine. As a matter of fact, economics as such was never practiced nor taught in Latin America until after its economic policy revolution in the 1930's. The economic man, or typical businessman of the Anglo-Saxon countries, did not exist in Latin America of the 19th century. Economic gains were not the main philosophy in those days. This tendency was helped by the presence of large sectors of self-sufficient, economically unambitioned Indians and the omnipotent Catholic Church, which did not encourage economic speculation nor theorizing in particular. The rewards of life were mainly to be expected in the hereafter. Contrary to this, in the Protestant religions success on earth proves approval by God of the individuals involved in the most successful ventures.

[9] Pedro C. M. Teichert, "The Economic Policy Revolution in Latin America," *Inter American Economic Affairs,* Vol. X, No. 3 (1956), p. 87.

Because of the absence of native economists, there existed a lack of understanding on the part of Latin Americans of their own economic problems, while the theoreticians of the great industrial powers were much too busy with their own problems to give much thought to the periphery. But the relative importance of economics was driven home to Latin America after the World War I experience and the depression of the 1930's. Economic self-assertion now became a goal worth striving for, and after World War II it was definitely taken seriously, in order not to lose all the gains made since World War I. Today a definite will exists to improve the economic level of the people, and economic activity is considered just as important and ethical as philosophy and religon.

Out of this new direction of thought Latin America has developed a body of economic theories particularly fit to its problems. And since it is the theory of an underdeveloped area it fits many of the other underdeveloped areas of the world similarly structured. "The theory of the peripheral economy," as we shall call the new theory—it has not yet been completely molded into a systematic body of thought—has mainly originated with Professor Raul Prebisch, now the Secretary of the Economic Commission for Latin America of the United Nations. His ideas and concepts about the periphery were first published by the United Nations in 1949.[10]

The main characteristic of the peripheral theory is dynamics. It is based on the interrelation of technical problems, savings, investments, and capital formation, and of course it stresses the institutional factors involved in the developmental process. The theory proposes accelerated economic de-

[10] Raul Prebisch, *El Desarrollo Economico de la America Latina y algunos de sus Principales Problemas,* United Nations Document No. E/CN. 12/89 (Lake Success, N. Y., 1949). Further references will be based on the English edition: *The Economic Development of Latin America and its Principal Problems,* United Nations Document No. E/CN. 12/87 Rev. 1 (Lake Success, N. Y., 1950).

velopment and examines the means by which this could be achieved. It proposes measures by which to avoid the high fluctuations to which especially the underdeveloped, monocultural export economies are submitted. The final goal is the raising of the standard of living of the masses.

III. Towards an Explanation of the Peripheral Theory

The peripheral theory starts out with an explanation of the interrelation of the Latin American economy with that of the industrialized nations of the world. It maintains that it is theoretically correct under pure competition to assume that technical progress lowers costs, but that in practice prices fall less than costs. This discrepancy is ascribed to the difference between the assumptions in the pure model and the realities and imperfections of the actual world. The same holds true for the international trade model. Furthermore, since economic theory was mainly developed in Europe and the U. S., the assumptions of the theoretical model were mainly taken from the conditions existing in those regions.

Historically speaking Latin America, of course, was drawn into the orbit of the industrialized world powers. Because of the special characteristics of Latin America as far as resources and population were concerned, it specialized in the production of raw materials and food for the industrial centers. In return Latin America received industrial manufactures and capital equipment. This exchange was advantageous according to the principle of comparative costs, since the Latin American export products were relatively cheaper than in the industrialized countries. Exchange of food for machinery was, therefore, very profitable for both parties concerned.

Continued growth of the industrial centers also increased the demand for food and raw materials, which in turn helped to develop Latin America further. But this development was directed by the kind of demand existing in the industrial centers. It was the export industries of food and raw

materials that grew, since their proceeds in turn were used to import capital equipment for their further expansion. The rest of the national economies of Latin America remained in their traditional setting of backwardness and kept working with pre-capitalistic methods. The result of these different developmental methods was for Europe to develop a balanced economy in which technical progress spread equally through the whole economy, while for Latin America it meant a rapid development of its export industries, but backwardness for the rest of its economy and no advantage from an equal spreading of developmental progress through the whole economy. Latin America developed an economic pattern of advanced clusters of production and trade and vast backward areas in the hinterland.

According to the theoretical model of 19th century laissez faire economics and the international division of labor, the terms of trade for producers of food and raw materials should have improved continuously because technical progress is faster and more intensive in industry than in agriculture and raw materials production.[11] In reality the contrary has happened. Taking 1876 to 1880 as 100, in the 1930's with an equal amount of food and raw materials only 63 per cent of industrial goods could be bought by Latin America from the manufacturing centers of the world.[12] Furthermore Europe and the U. S. not only failed to pass on their large industrial productivity increases, but according to Dr. Prebisch the former also robbed the Latin American nations of some of their own agricultural and raw material productivity increases. This was a further deterrent to the already relatively weak growth potential of the Latin American economies. The very fact that the Latin American nations only felt the residual effects of world economic development, while the industrial nations created their own developmental

[11] Prebisch, *Economic Development*, p. 8.
[12] *Ibid.*, p. 9.

impulses, brought about Professor Prebisch's terminology of the "center and the periphery." This particularly applied to the effects of booms and depressions generated in the center.

Another relationship between center and periphery is associated with demand elasticities for manufactured goods, foodstuffs, and raw materials.[13] Because of the inelasticity of demand for agricultural commodities, their prices during the downswing of the cycle dropped more and faster than those of manufactured goods. Small changes in supply of food and raw materials create large price fluctuations if we assume a stable demand. During boom periods increased demand for agricultural and raw materials makes them rise faster than industrial goods, but the gains of the boom are smaller than the losses during the depression. This again proves that the terms of trade were deteriorating for Latin America.[14]

The gains made by labor in the industrial centers during boom periods are difficult to reverse when the cycle turns. The pressure for lower prices, therefore, is passed on to the periphery, since the less wages and costs can be reduced in the center, the more the burden will be passed on to the periphery where labor traditionally is not organized. Even if prices (costs) remained stable in the periphery, such a condition during a depression would only lead to larger accumulations of unsellable surplusses because of decreased demand in the center.

Added to the above problems is the fact that import elasticity of the center for raw materials is less than unitary. That is, for every increase in national income of the center,

[13] In general terms, "demand elasticity" refers to buyers' responses to price changes. Demand is called elastic when after a price drop the public's total expenditure on a given commodity increases. The demand for a product is inelastic when in spite of a drop in price, total expenditures on the product decline. Stated differently: in order to sell larger quantities of an inelastic product, its price has to be lowered much more than for products with elastic demand.

[14] Economic Commission for Latin America, *Theoretical and Practical Problems of Economic Growth,* United Nations Document No. E/CN. 12/221 (Lake Success, N. Y., 1951), p. 30.

demand for food and raw materials increases less than proportional. The opposite is true for Latin American demand for industrial commodities.[15] The reasons for the decreasing import elasticity of the center are: (1) more economical use of raw materials in the center, (2) decreasing percentage of raw materials in value of end product, (3) substitution of raw materials by synthetic products. All three changes are results of technological progress and explain why consumption of raw materials in the center grows less than its total income. Increasing income also increases the demand for services rather than for additional food.

The importance of capital formation. The only way the periphery could counteract the impact of decreasing terms of trade would be by increased productivity, which means lowering of production costs. But this is for many reasons more difficult at the periphery than at the center. Lack of capital and insufficient training of the labor force hinder technological progress at the periphery. The underdeveloped areas of Latin America—and underdeveloped implies a relative lack of capital—employ large quantities of cheap labor in agriculture with little capital.

The lack of capital is really the main deterrent to economic growth of the periphery. Capital is created by savings and investments. Savings mean to abstain from consumption and could be increased if productivity would increase. But productivity can only increase if more capital is employed. But poor people cannot save much if living already is at the subsistance level. So we are in a vicious circle which is worsened by the decreasing terms of trade. This is similar to the exposition of Professor Nurkse's vicious circle of poverty.[16] Also the propensity to consume is very high in Latin America, and higher incomes are all consumed; consumption pat-

[15] *Ibid.*, p. 31.

[16] Ragnar Nurkse, *Problems of Capital Formation in Underdeveloped Countries* (Oxford: Basil Blackwell, 1953), p. 5.

terns of the center are readily imitated by Latin Americans. The weak capital formation of the periphery in turn explains the absence of the economy's self-generating power (the "multiplier effect" in the center) and its dependence on the cycle of the center.[17]

Expensive labor at the center is the best incentive for capital formation and technological progress. This incentive is lacking at the periphery where labor for institutional-historical reasons is still cheap, or at least appears to be so to the individual entrepreneur. Labor, principally employed in agriculture, is still in plentiful supply in Latin America, while capital is relatively scarce and expensive. Labor is not absorbed rapidly enough by industry, because of the lack of capital and capital-producing industries. The enclosure movements of Europe have not taken place yet in the periphery, neither do labor movements take place on an international scale according to the theoretical optimal distribution and allocation of the factors of production under free trade conditions. This, therefore, explains the continuous over-abundance of cheap labor in Latin America, especially in relation to the lack of capital, and is referred to as underemployment.

Another difficulty with which the peripheral economy has to cope is the fact that the vicious circle of poverty cannot be broken by increased export production. In the first place, the import elasticity of Latin America's largest buyer, the U. S., is less than unity and, therefore, sets a limit to the export and, therefore, import capacity of Latin America. In the second place, increased exports would immediately increase

[17] In industrialized countries, economic activity can be stimulated by injections of purchasing power into the economy, since the capital equipment exists with which to produce more goods and employ more labor. Added income will in turn be spent, securing additional employment and income. Thus the final income generated is a multiple of the original injection. By contrast, money injected in an underdeveloped economy will generally be spent for imports of capital equipment, and therefore the multiplier effect will start working in the exporting country (where it becomes an increase in purchasing power) rather than in the underdeveloped nation.

competition among the peripheral countries and decrease the terms of trade, because of the necessary lowering of prices. Also the import capacity of the periphery is growing slower than population increases. This further widens the gap of personal incomes between the periphery and the center. Finally, if the rate of saving could be increased in Latin America, the largest part of it would be transmitted into demand for foreign investment goods, since they are lacking at home. This would increase the import co-efficient without a corresponding increase in the export co-efficient. Difficulties with the balance of payments would be the immediate result.

This leads to a final remark in the presentation of the theory of the periphery, namely, the paramount importance of trade for any further development of Latin America to a state of well being. But unfortunately it is through trade that the cycle effects of the center are passed on to the periphery, which has to accept them in passivity. While in the center investments create developmental impulses, the periphery can only improve through trade, which in fact makes it more vulnerable than the center to outside developments. For the same reasons the attempt to bring about economic development through deficit spending—assuming the multiplier effect will be set in motion—can only lead to inflation in Latin America. At least the new funds will tend to increase imports of capital equipment without an immediate increase of national output, which will strain the nation's foreign exchange position and might lead to the devaluation of its currency, with concomitant price raises for import goods.

IV. The Theory of the Periphery and the Trends in Latin American Economic Policy

Economic policy in contemporary Latin America has gone through two phases, The first one was a reaction to the depression of the 1930's and was based on anti-cyclical theories. But it has by now definitely given way to a policy of eco-

nomic development based on theories of economic growth on which so much work has been done lately. The shift is due to the final outcome of a long political-economic struggle in Latin America that started around 1900. Political and economic self-assertion were the goals of the new policy, and the economic theory of the periphery became its rationale. The interesting thing to keep in mind, though, is the fact that the economic policy revolution in Latin America took place before the appropriate economic theories were developed, the latter having arisen belatedly and being still in process.

Latin America is undergoing its own industrial revolution. Its own, because the cultural-economic and political background of Latin America differs greatly from that of 19th-century Europe. Hence the urgency to develop its own theory of growth. Just as the classical body of economics was developed when the basis for the coming industrial revolution was already an accomplished fact, so the theory of the periphery, and its various companion theories of growth, are only rationalizing what is already under way.

In spite of the fatalistic theory of the vicious circle of poverty mentioned above, Latin America has proceeded to develop. At the moment we are in the middle of a characteristic experience in the development of steel capacity. Most theories argue against the development of steel mills in Latin America. The fact is that they are being built. I am therefore inclined to believe that in not too many years a satisfactory theory will be available—if it does not exist already—to explain this phenomenon.

Past experience shows that Latin American economic development has been steady, especially since the time when steel mills were being developed. There is no reason to believe that it will be different in the future. The argument against establishing steel capacity is of course a strictly economic one, based entirely on comparative price analysis,

which is presumed to show that in a world of free trade every nation stands to gain if it buys the commodities from abroad that it cannot produce cheaper at home. But this does not measure the total impact on overall economic development and industrialization by the establishment of steel capacity. We must also remember that Latin American economic development is a long run venture, and that it is much too early to criticize intelligently and thoroughly the constituent parts of its developmental efforts.

The function of economic policy and economic programming is to include in its agenda the political, social, *and* economic goals. In a closed (self-generating) economy—such as the U. S., where social and political factors are taken for granted—this is not of paramount importance. But Latin America at present is fighting many revolutions, not just an industrial revolution in the narrowest sense. At the same time it is fighting an educational revolution, a land reform revolution, and of course a political revolution. In short, Latin America's present industrial revolution is an attempt to change *all* values and to establish a completely new society, and consequently has not only to settle all of its own problems but also to accommodate itself to a world that has developed quite differently from the Latin American pattern. This dual struggle is of course the main plight of the world's underdeveloped areas.[18]

Two practical alternatives of capital formation. In order to implement the desired accelerated economic development of Latin America, its policy makers have two alternatives. They can either break the vicious circle of poverty and accumulate developmental capital by decreasing the already low consumption standards in some republics, or they can try to attract foreign capital.

[18] Frank Tannenbaum, "Reflections on the Mexican Revolution," *Journal of International Affairs,* IX (1955), 37-46.

Professor Prebisch would take the latter alternative, since it is not easy for political and other reasons to curtail the already low consumption of the people. But the course that will be taken in each republic will depend entirely on its particular political and social circumstances. A combination of the two alternatives is also possible, as has been the case in Mexico; there forced savings were built up by permitting high profits to accumulate, while at the same time foreign capital, especially in manufacturing, was welcomed. It has to be kept in mind, nevertheless, that the Latin American nations consider the use of foreign capital only as a temporary measure for their initial development and for breaking the vicious circle of poverty. The final goal is to reach a developmental level where Latin America can generate its own investment capital. The present boom in the installation of steel capacity clearly indicates this trend.

The main consideration in thinking of foreign capital imports only as a temporary measure is not fear of political domination, but the difficulties of peripheral economies with foreign exchange. In depressionary times, interest payments and amortization do not drop proportionately with the decline and drying up of foreign capital sources. Also capital flights worsen the balance of payments in such a situation and makes the country more vulnerable to the cycle—the contrary of what economic development is supposed to bring about.

Foreign capital should be used only to bring about enough development to make it possible for the individual Latin American economies to generate enough of their own savings to carry on future economic development. If a prolonged influx of foreign capital does not bring about increased savings at home, its acquisition is not only meaningless but actually harmful to the future development of the nation concerned. Again Mexico is an excellent example of a Latin American country that has reached this point.

Only 4 per cent of total investments have come from foreign countries in the last decade.

Social marginal productivity versus comparative costs. If we assume that additional capital funds could break the vicious circle of poverty, then the question arises as to the best application of these additional funds. If factor mobility (the ease with which labor and capital can move from one occupation or industry to another) were to exist in the periphery to the same extent as in the center and if the periphery could go ahead and expand its relatively more productive export branches to any extent they wanted to, then we could answer the question of the best application of capital by using the traditional tools of economic theory. But since neither one of these assumptions exists, we have to look for a new concept of maximum allocation and profitability of capital application.

In this connection some special considerations have to be kept in mind. For instance, in most economies there exists no doubt about the profitability of building a more modern factory to replace a technically outmoded plant. The new plant saves labor and is more efficient and consequently can produce more cheaply. But the same is not necessarily true in an underdeveloped country, where labor is abundant and cheap, while capital is scarce and dear. Intensification of the application of capital will only lead to its becoming more expensive. The optimal combination of capital and labor, therefore, requires in the periphery a lower intensification of capital than in the center where capital is abundant.

The larger the difference between wages and interest between periphery and center, the less will the intensity of capital have to be in the periphery. The intensification of capital in one sector of the economy will not yield the largest national output. And it is the total availability of goods and services that concerns the periphery most, not the costs as

such. This leads to the paradox that to produce a good more expensive at the periphery than in the center might still be the most economic thing to do for the periphery. The criterion for the periphery in the application of capital, therefore, is social marginal productivity, that is, the application of each additional unit of capital must be in places where it yields the highest social marginal productivity. Therefore the application of a little capital in many sectors yields larger results than the same application in an industry where a certain quantity of capital is already available. In Mexico, for instance, a small investment in agricultural training and seed improvement has contributed to a larger additional output than the intensification of capital in huge irrigation projects.[19]

Of course there is an exception to this rule, in that the employment of additional capital in a place where social marginal productivity would not be maximized would still be recommendable. This would be the case in a situation where, because of the new investment of capital, the whole economy would become less dependent on cyclical fluctuations, or, as in the development of steel capacity in Latin America already mentioned, where the goal is to develop a closed economy and to further the national development of metal fabricating industries. The social gain in the form of technical education and acquisition of skills has to be added towards the computation of the maximization of national output, regardless of whether this addition is made in the form of goods or services. Some critics in the center seem to forget that education is costly, even in the center—here the cost is eventually paid in taxes. In the periphery the cost is collected through higher prices of products; still, total social marginal productivity may be maximized in spite of higher prices.

[19] International Bank for Reconstruction and Development Report, *The Economic Development of Mexico* (Baltimore: Johns Hopkins Press, 1953), p. 27.

The peripheral economy, and industry in particular, generally produces more expensively—in dollars and cents accounts—than in the center. Nevertheless this does not mean that it is uneconomical from a social or national point of view. It is almost superfluous to say that without even the possibility of invoking the infant industry argument (i.e., giving tariff protection to new industries until a large enough market has been established so that they can produce economically), the industrialization of Latin America, taking its present state of development into consideration, would be practically impossible.

The underemployment of some Latin American labor puts the profitability of enterprises into a different light in the periphery. As long as labor's productivity is increased by moving from underemployment in agriculture to more efficient uses in industry, social marginal productivity might be increased. Of course in a world of free economics this underemployed labor of the periphery should have been employed by the center, which furthermore would have brought down the prices of industrial goods in relation to agricultural commodities of the periphery. But the immobility of resources mentioned above prevents this process of equalization. Also since the demand elasticity of the center for agricultural raw materials is less than unity, the periphery can only decrease the discrepancy of its national income with the center by diverting a larger and larger part of its productive apparatus to the production of manufactured goods. To remain primarily a raw material producer would mean to increase the income level differential between center and periphery. Moreover technological progress as such is more rapid in industrialized countries and lags in raw material producing areas.

The limits of industrialization are set for the periphery at the point where further industrial expansion would take place at the cost of agriculture, by decreasing the latter's

labor supply so much that the total social product would decrease. In this connection one must not forget that agriculture at the moment provides the export earnings and foreign exchange on which any further industrialization is dependent.

Dependence on foreign trade. One of the key problems of the whole process of development and industrialization of the periphery is the dependence of this region on foreign trade and supplies. It is true that foreign investments can increase the process of capital development, but it will not make this process automatic and continuous in the future. The reason is that increased development and income leads to increased import demands, even if a higher rate of savings has been achieved. The periphery suffers structurally not only from a lack of sufficient capital (savings) but also from a lack of basic capital supplying industries. Increased industrialization, therefore, requires larger imports of capital equipment, raw materials (including fuels), and semi-manufactured goods. Increased income also increases the demand for imported consumer goods, because of emulation of the consumption patterns of the center. The result is a tremendous pressure on the capacity to import.

The only apparent way to counteract the above trend is, first, by way of government regulation of foreign trade to achieve importation of the capital equipment which is most needed. Very often the composition of imports has to be changed. This does not mean decreasing imports, since historically imports among industrializing countries increase rather than decrease.[20] Increased national savings alone do not guarantee investments if the funds are spent on importation of foreign consumers luxury goods. Higher savings would therefore not automatically break the vicious circle of

[20] Eugene Staley, *World Economic Development: Effects on Established Industrial Countries* (Montreal: International Labor Office, 2nd ed., 1945), Chapter VIII.

poverty. The second step in counteracting the pressure of the import capacity of the periphery is the establishment of basic industries. This may be costly at the beginning, but with increased output sizeable economies will set in, and furthermore the availability of capital equipment industries will make the periphery less dependent on capital imports and foreign market fluctuation, and will also lead the periphery to develop a closed economy in which the function of monetary and fiscal policies through the working of the multiplier become effective. Only with these considerations in mind is it possible to understand the pressure of Latin American governments for the establishment of steel mills and the metal manufacturing industries.

V. Conclusion: Criticism of the Peripheral Theory

Some of the criticism of Prebisch's peripheral theory questions the validity of his argument about the deterioration of Latin America's terms of trade. True enough, his empirical evidence of such deterioration for the 1870-1930 period holds water. But thereafter the trend has reversed, to the extent that Latin America's terms of trade are now continuously improving. There seems to be no evidence, though, in the writings of Professor Prebisch indicating a dogmatic prediction that the terms of trade would continue to deteriorate forever. It rather seems that Prebisch used the terms-of-trade explanation to show under what conditions the periphery has developed in the past, and what might be done to remedy this unfavorable situation. The actual reversal of the terms of trade does not invalidate his theory whatsoever. As a matter of fact, it might well be that the continued improvement, especially since the formulation of his peripheral theory, is to no small degree attributable to the policies which Professor Prebisch himself has proposed.

Another criticism of the peripheral theory might be its excessive stress on the importance of foreign capital in future

Latin American development. Foreign capital is not going to be invested according to theoretical dictates but on practical grounds. What counts for foreign capital investments is the guarantee of being able to recoup the principal and to transfer profits, and also the possibility of spreading risk. The general political situation and investment climate, too, will be of paramount importance. Recognizing these factors, Mexico has so geared its policy of capital formation in the past decade as not to count on foreign capital to do the principal developmental job.[21]

Another problem that excessive stress and dependence on foreign capital investments might create is the fact that it might lead Latin American countries to blame the foreign investors—or the lack of their investments—for any domestic economic trouble that arises. Before Latin America should ask for foreign capital, it should make sure that it cannot first find the means of increasing productivity at home. These means are many times available. Too strong a belief in the vicious circle of poverty might lead the republics to take a dim and fatalistic view of the future and induce them to do nothing if foreign capital does not become available. But again this criticism does not invalidate the main body of the peripheral theory.

Finally the greatest criticism of the peripheral theory might well be its boldness, since the program of development based on Prebisch's peripheral theory has to be built on a certain social-political structure. To be effective, such a program and theory would, for instance, require the assistance of a flexible and competent public administration, often lacking in Latin America. Traditional administrative formality, inherited from colonial days, is a deterrent to quick adaptability to the planners and leaders of a developmental plan built on the peripheral theory. Furthermore *any* economic decision, and especially in Latin America, must take into consideration its

[21] IBRD Report, *Economic Development of Mexico,* pp. 11-18.

many political, cultural, social, and religious repercussions; thus it is very difficult to predict the outcome of any particular economic plan or measure.

Other developmental difficulties in Latin America are its unstable political conditions, the traditional role of the Army in this respect, and personalism as an institution. They all stand in the way of needed objectivity in the execution of any economic program built on such an intricate theory as Prebisch's. From a technical point of view, many Latin American republics lack a body of trained economists and statisticians, and in many nations national and personal income figures, for instance, are not yet available. Last, but not least, administrative corruption should be mentioned as a deterrent to the execution of Latin American developmental programs. But of course such a situation should only be considered as making development more difficult, and should not suggest the necessity of a fatalistic outlook nor encourage the dropping of any attempt at programmed and planned development. The very fact that Latin America is trying purposefully to further its economic development is already quite a step forward in comparison with the tradition of the 19th century, where economic matters were handled through the strict application of dogmatic economic directives and rules, or through the absence of government interest in the matter at all.

Ever since the publication of Prebisch's work in 1949, his theory has found acclaim among political and economic circles of Latin America. As a matter of fact, this is the first time that an economic theory developed by Latin Americans themselves has been widely read and publicized and has not been lost among the competitive and translated literature from abroad. Unfortunately Prebisch is quoted by many politicians who, for their political purposes, misinterpret or exaggerate his arguments (especially in respect to the terms of trade, mentioned above). Nevertheless it might not be an

exaggeration to state that Prebisch's theory seems to be accepted in present day Latin America as was Adam Smith's in the *Wealth of Nations* shortly before and right after the Latin American wars of independence. In both instances Latin America has undergone a decisive transformation in its economic policy.

The final observation to be drawn from the present study is that economic growth cannot be explained satisfactorily in economic terms alone, but is conditioned by social and political institutions as much as by economic factors. Explanations that are purely theoretical run into difficulties because comparisons of welfare involve not only income differences and the values attached to the different ways in which wants are satisfied in the market, but also elements of welfare not evaluated in the market. While, for instance, the possible number of theoretical growth models in underdeveloped areas could be infinite, economists still must have a strong feeling for reality and a thorough institutional and historical understanding in order to select the models most useful in explaining economic processes in these regions. The difficulty with econometric models in particular is the fact that the variables selected must be those that are measurable, whereas very little is as yet accurately measurable in underdeveloped areas. Moreover, assumed parameters are altering all the time and social influences are subject to changes on short notice. Furthermore, where the problem is to achieve simultaneous development on a broad front in a hitherto stagnant economy, the Western economic technique of piecemeal examination and isolation of economic phenomena has only limited usefulness. The change of social climate and institutions in backward areas is a necessary condition for economic change itself. This is of particular significance if it is true, as many economists believe, that capital accumulation in Western development did not play the key part most generally assumed. Western development itself provided the

capital needed as well as the additional consumption goods demanded as income rose. The whole process of development was pushed forward by the entrepreneurs, which were found in and conditioned by a social environment quite favorable to enterprise and innovation. At the bottom of the whole process of western development lay the great spiritual and cultural awakening of the Western world, the Renaissance. Discoveries, inventions, and population growth were the favorable background against which the quickly developing entrepreneurial class could unfold its activities.

It is such a cultural and spiritual innovation that has to lie at the bottom of any attempt of underdeveloped areas to accelerate their growth. Fundamentally, it is not the lack of capital that has kept them backward for so long, since in Western development the means of production required for the smallest unit of investment were also small in relation to savings of the potential investors or entrepreneurs. Furthermore, technical innovation, in a sense, finances itself, since progress is achieved when capital replacements take place out of accumulated depreciation funds.

It is therefore the main problem of development to establish a social climate wherein it will become possible to convert a low rate of savings into a high rate, which in turn will be directed into productive capital formation. Since, in most under-developed areas, savings are mainly generated by the accumulation of rent and profit by a small wealthy class, economic development will only take place after this class is made ineffective by a social and political revolution, and a middle class has been established. This has been the function of the Mexican Revolution. The landed aristocracy was destroyed, and now the way lies open for a middle class, an entrepreneurial class, to develop. This does not mean that a free enterprise society, Western style, will be the inevitable result of such a transformation. Such a complete change would take time, being brought about by revolution and not

by slow evolution as in the Western countries. As long as the newly created state capitalism, and the increasing standard of living that is supposed to go with it, favor and protect those human and political freedoms we cherish most, we should be content and helpful to the areas so developing.

Unfortunately, criticism is directed most often against the very force that is to transform the whole structure of Latin America, as well as other underdeveloped areas: the present process of industrialization of these underdeveloped areas. Such criticism rests on the principle that the allocation of capital among investments should be on the basis of their marginal productivity. The main objection, of course, to this criticism is that it seems to consider capital as the driving force of economic development, and the maximization of capital as the main goal of economic activity. If this were true, and if we were concerned with maximizing additions to the world's wealth and not so much with reductions in inequalities between nations, it would be the best policy to increase investments in the already wealthy countries, since there it would render its maximum marginal contribution. This would forever doom the underdeveloped areas of the world.

Because of this same criterion of private marginal productivity, foreign capital in underdeveloped areas tends to be invested in export industries and not in internal development, since marginal productivity or profits are higher in the former. Therefore, if governments want to bring about the internal development of their economies, they will have purposely to direct investments and to use social rather than private marginal productivity as their criterion. Under this new criterion, social profitability oftentimes exceeds private profitability, since the former helps create the very environment that eventually will be favorable to the activities of the individual entrepreneur as the driving force of further development. This is particularly true with regard to the crea-

tion of overhead capital, without which no private investment will take place. The extreme case of social marginal productivity, of course, refers to the investment in human resources, where private marginal productivity as a guide can hardly be used at all. It also indicates the dilemma between short-run costs and long-range returns.

Suffice it here to say that it was because of the beforementioned considerations that the present paper has particularly stressed the institutional implications of economic growth so peculiar to Latin America and other underdeveloped areas of the world. I have felt that economic theory, economic policy, and institutional changes form an unseparable unity in the study of Latin American economic growth, and that their synthesis presents a new analytical approach to the study of economic development.